

G1 Cb,Hy,Ak,C,CH2

G2 H,Ak

Structure attributes must be viewed using STN Express query preparation.

=> s l1

SAMPLE SEARCH INITIATED 10:44:22 FILE 'REGISTRY'

SAMPLE SCREEN SEARCH COMPLETED - 25 TO ITERATE

100.0% PROCESSED 25 ITERATIONS

10 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
 BATCH **COMPLETE**

PROJECTED ITERATIONS: 200 TO 800

PROJECTED ANSWERS: 11 TO 389

L2 10 SEA SSS SAM L1

=> s l1 sss full

FULL SEARCH INITIATED 10:44:28 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 595 TO ITERATE

100.0% PROCESSED 595 ITERATIONS

329 ANSWERS

SEARCH TIME: 00.00.01

L3 329 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

161.33

161.54

FILE 'CAPLUS' ENTERED AT 10:44:33 ON 22 DEC 2005

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FILE COVERS 1907 - 22 Dec 2005 VOL 143 ISS 26
FILE LAST UPDATED: 21 Dec 2005 (20051221/ED)

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=> s l3

L4 11 L3

=> d ibib abs hitstr tot

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER:

TITLE:

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

DOCUMENT TYPE:

LANGUAGE:

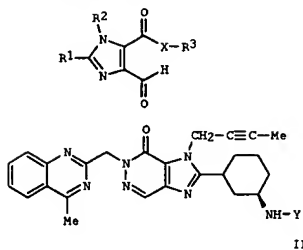
FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005110999	A1	20051124	WO 2005-EP4942	20050506
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HA, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CI, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CH, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 102004022970	A1	20051201	DE 2004-102004022970	20040510
US 2005261352	A1	20051124	US 2005-124798	20050509
PRIORITY APPLN. INFO.:			DE 2004-102004022970A	20040510
			US 2004-576219P	P 20040602

G1

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



AB Title compds. I [R1 = halo; R2 = alkyl with provisos; X = O, S; R3 = H, alkyl with provisos] were prep'd as intermediates for producing medicaments or pesticides. For example, TFA mediated deprotection of Boc-amine II (Y = Boc) afforded imidazo[4,5-d]pyridazin-4-ol II (Y = H) in 89% yield.

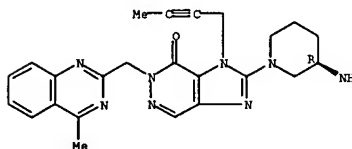
IT 705279-88-5P 705279-97-6P 705279-98-7P
705279-99-8P 705280-19-9P 705280-67-7P
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855789-82-1P 869966-01-8P 869966-02-9P
869966-03-0P 869966-04-1P 869966-05-2P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

[preparation of imidazo[4,5-d]pyridazin-4-ols as intermediate products for producing medicaments and pesticides]

RN 705279-88-5 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

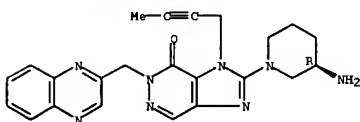


L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 705279-97-6 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-(2-quinoxalinylmethyl)- (9CI) (CA INDEX NAME)

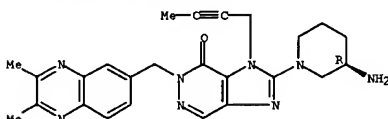
Absolute stereochemistry.



RN 705279-98-7 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(2,3-dimethyl-6-quinoxalinylmethyl)-3,5-dihydro- (9CI) (CA INDEX NAME)]

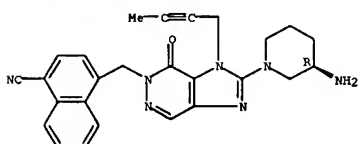
Absolute stereochemistry.



RN 705279-99-8 CAPLUS

CN 1-Naphthalenecarbonitrile, 4-[[2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



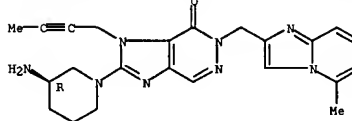
RN 705280-19-9 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(5-methylimidazo[1,2-a]pyridin-2-yl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

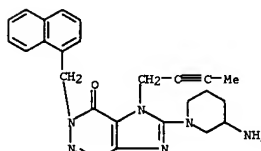
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L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



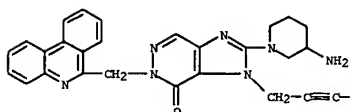
RN 705280-67-7 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-(6-phenanthridinylmethyl)- (9CI) (CA INDEX NAME)



RN 813462-55-4 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-(6-phenanthridinylmethyl)- (9CI) (CA INDEX NAME)

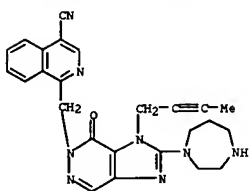


RN 855789-80-9 CAPLUS

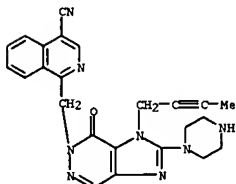
CN 4-Isoquinolinecarbonitrile, 1-[[[3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

Habte

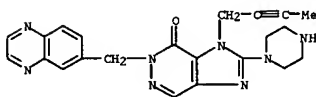
L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 855789-81-0 CAPLUS
CN 4-isoquinolinecarbonitrile, 1-[(3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]- (9CI) (CA INDEX NAME)



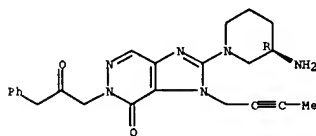
RN 855789-82-1 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(6-quinoxalinylmethyl)- (9CI) (CA INDEX NAME)



RN 869966-01-8 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

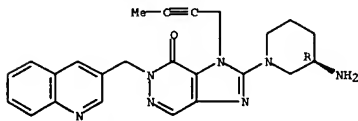
Absolute stereochemistry.

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 869966-05-2 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

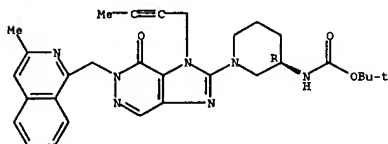
Absolute stereochemistry.



IT 869966-08-5P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of imidazo[4,5-d]pyridazin-4-ols as intermediate products for producing medicaments and pesticides)

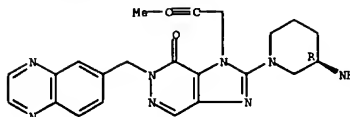
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CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



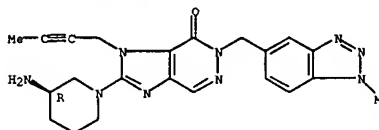
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



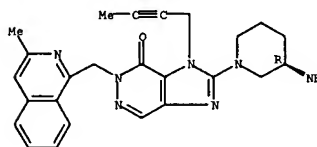
RN 869966-02-9 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



RN 869966-03-0 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.



RN 869966-04-1 CAPLUS
CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.

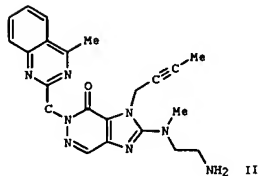
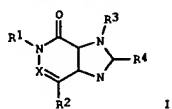
L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:1130640 CAPLUS
DOCUMENT NUMBER: 143:387050
TITLE: Preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-c]pyridinones as inhibitors of dipeptidylpeptidase IV
INVENTOR(S): Eckhardt, Matthias; Himmelsbach, Frank; Langkopf, Elke; Haeu, Norbert; Tadayyon, Mohammadi Thomas, Leo
PATENT ASSIGNEE(S): Boehringer Ingelheim International G.m.b.H., Germany; Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005097798	A1	20051020	WO 2005-EP3474	20050402
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
DE 102004017739	A1	20051027	DE 2004-102004017739	20040410
US 2005234235	A1	20051020	US 2005-102048	20050408
PRIORITY APPL. INFO.:			DE 2004-102004017739A	20040410
			DE 2004-102004025552A	20040525
			US 2004-568137P	P 20040505
			US 2004-582265P	P 20040623

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L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



AB Title compds. I [R1 = arylmethyl, arylethyl, heteroarylmethyl, etc.; X = N or CR5; R5 = H or alkyl; R2 = H, aryl, heteroaryl, etc.; R3 = (un)substituted cycloalkenylmethyl, alkenyl, alkynyl, etc.; R4 = NR6R7; R6 = H, alkyl, cycloalkyl, etc.; R7 = (un)substituted alkyl-R8; R8 = amino or alkylamino] and their pharmaceutically acceptable salts, are prepared and disclosed as inhibitors of dipeptidylpeptidase IV (DPP-IV). Thus, e.g., II was prepared by amination of 2-bromo-3-(2-buten-1-yl)-5-[(4-methyl-chinazolin-2-yl)methyl]-3,5-dihydro-4,5-dipyridazin-4-one (preparation given)

with N-methyl-ethylenediamine. The activity of I was evaluated using fluorescence inhibition assays and it was revealed that selected compds. of the invention possessed IC50 values in the range of 1 up to 336 nM. I as inhibitor of DPP-IV should prove useful in the treatment of diseases such as but not limited to diabetes, obesity and arthritis.

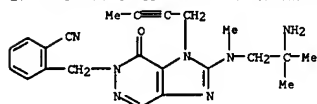
Pharmaceutical compds. comprising I are disclosed.

IT 866933-11-1P 866933-12-2P 866933-14-4P 866933-15-5P 866933-16-6P 866933-17-7P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)

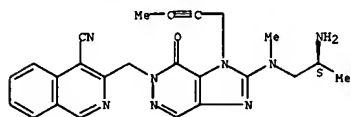
RN 866933-11-1 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



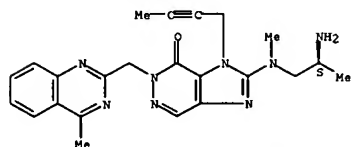
RN 866933-16-6 CAPLUS
CN 4-Isouquinolinecarbonitrile, 3-[[2-[(2S)-2-aminopropyl]methylamino]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 866933-17-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2S)-2-aminopropyl]methylamino]-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



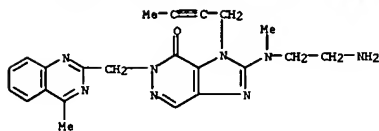
IT 866933-21-3P 866933-22-4P 866933-23-5P 866933-24-6P 866933-25-7P 866933-26-8P 866933-27-9P 866933-28-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of aminoimidazo[4,5-d]pyridazinones and aminoimidazo[4,5-d]pyridinones as inhibitors of dipeptidylpeptidase IV)

RN 866933-21-3 CAPLUS

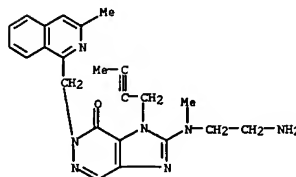
CN Benzonitrile, 2-[[2-[(2S)-2-aminopropyl]amino]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

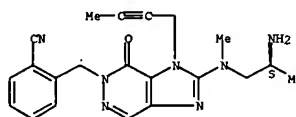


RN 866933-12-2 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(2-aminoethyl)methylamino]-3-(2-butynyl)-3,5-dihydro-5-[(3-methyl-1-isouquinolyl)methyl]- (9CI) (CA INDEX NAME)



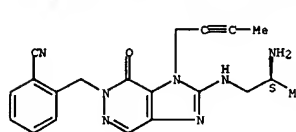
RN 866933-14-4 CAPLUS
CN Benzonitrile, 2-[[2-[[[(2S)-2-aminopropyl]methylamino]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



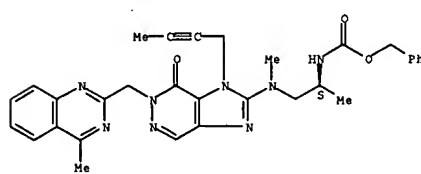
RN 866933-15-5 CAPLUS
CN Benzonitrile, 2-[[2-[[[(2-amino-2-methylpropyl)methylamino]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



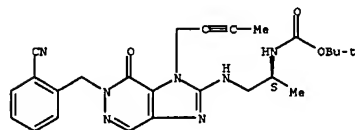
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CN Carbamic acid, [[1S]-2-[[1-(2-butynyl)-6,7-dihydro-6-[(4-methyl-2-quinazolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



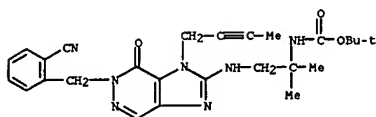
RN 866933-23-5 CAPLUS
CN Carbamic acid, [[1S]-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



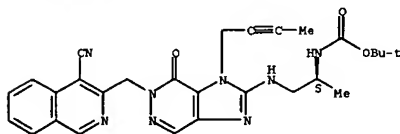
RN 866933-24-6 CAPLUS
CN Carbamic acid, [2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1,1-dimethylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



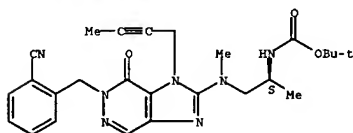
RN 866933-25-7 CAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]amino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 866933-26-8 CAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



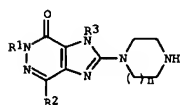
RN 866933-27-9 CAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(2-cyanophenyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:570898 CAPLUS
DOCUMENT NUMBER: 143:78214
TITLE: Preparation of (homo)piperazinylimidazopyridazinones for treatment of diabetes mellitus.
INVENTOR(S): Himmelsbach, Frank; Haeu, Norbert; Langkopf, Elke; Eckhardt, Matthias; Kauffmann-Hefner, Iris; Tadayyon, Mohammad; Thomas, Leo
PATENT ASSIGNEE(S): Boehringer Ingelheim International G.m.b.H., Germany; Boehringer Ingelheim Pharma G.m.b.H. & Co. KG
SOURCE: PCT Int. Appl., 57 pp.
CODEN: PIXX2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005058901	A1	20050630	WO 2004-EP14125	20041211
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PI, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TW, TR, TT, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, T, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10359098	A1	20050728	DE 2003-10359098	20031217
US 2005171093	A1	20050804	US 2004-16176	20041217
PRIORITY APPL. INFO.:			DE 2003-10359098	A 20031217
			US 2004-538555P	P 20040123

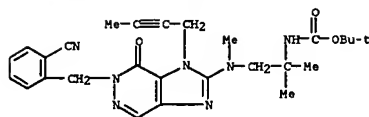
GI



AB Title compds. [1: R1 = (substituted) heteroarylalkyl, naphthylalkyl; R2 = H, Me; R3 = 2-buten-1-yl, 1-buten-1-yl, 2-buten-1-yl, 3-methyl-2-buten-1-yl, were prepared Thus, 2-bromo-3-(2-buten-1-yl)-5-[(4-methylquinazolin-2-yl)methyl]-3,5-dihydroimidazo[4,5-d]pyridazin-4-one (preparation given) and piperazine were microwaved in DMF at 200° for 5 min. to give 51% 2-(piperazin-1-yl)-3-(2-buten-1-yl)-5-[(4-methylquinazolin-2-yl)methyl]-3,5-dihydroimidazo[4,5-d]pyridazin-4-one. The latter inhibited dipeptidylpeptidase-IV with IC50 = 5 nM.
IT 855789-37-6P, 2-(Piperazin-1-yl)-3-(2-buten-1-yl)-5-[(4-methylquinazolin-2-yl)methyl]-3,5-dihydroimidazo[4,5-d]pyridazin-4-one

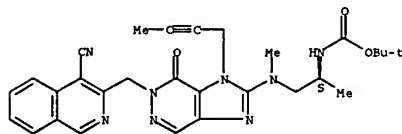
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L4 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 866933-28-0 CAPLUS
CN Carbamic acid, [(1S)-2-[[1-(2-butynyl)-6-[(4-cyano-3-isoquinolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]methylamino]-1-methylethyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

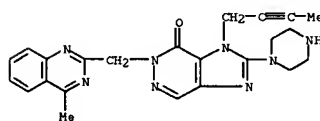
Absolute stereochemistry.



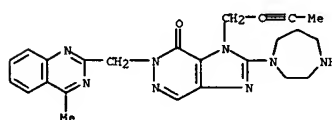
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

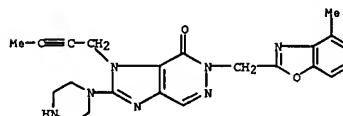
855789-38-7P, 2-[(1,4)Diazepan-1-yl]-3-(2-buten-1-yl)-5-[(4-methylquinazolin-2-yl)methyl]-3,5-dihydroimidazo[4,5-d]pyridazin-4-one
855789-39-8P, 2-(Piperazin-1-yl)-3-(2-buten-1-yl)-5-[(4-methylbenzoxazol-2-yl)methyl]-3,5-dihydroimidazo[4,5-d]pyridazin-4-one
855789-40-1P, 2-[(1,4)Diazepan-1-yl]-3-(2-buten-1-yl)-5-[(4-methylbenzoxazol-2-yl)methyl]-3,5-dihydroimidazo[4,5-d]pyridazin-4-one
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(claimed compd., prepn. of (homo)piperazinylimidazopyridazinones for treatment of diabetes mellitus)
RN 855789-37-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butenyl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)



RN 855789-38-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butenyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)



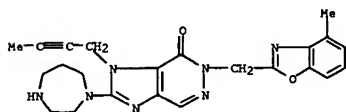
RN 855789-39-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butenyl)-3,5-dihydro-5-[(4-methyl-2-benzoxazolyl)methyl]-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)



RN 855789-40-1 CAPLUS

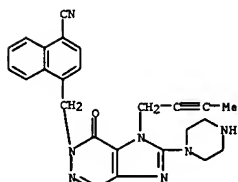
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L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butyryl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro-5-[(4-methyl-2-benzoxazolyl)methyl]- (9CI) (CA INDEX NAME)

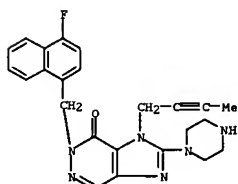


17 855789-60-5P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(2,3,8-trimethyl-quinoxalin-6-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-61-6P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(4-cyano-naphthalin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-62-7P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(4-cyano-naphthalin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-63-8P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(4-fluoro-naphthalin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-64-9P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(4-fluoro-naphthalin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-65-0P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(4-bromo-naphthalin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-66-1P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(4-bromo-naphthalin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-67-2P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(1,2,4,4-tetrazolol[4,3-a]pyridin-3-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-68-3P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(1-methyl-1H-benzotriazol-5-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-69-4P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(1-methyl-1H-benzotriazol-5-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-70-5P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(1,2,4,4-tetrazolol[4,3-a]pyridin-3-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-71-6P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(1,2,4,4-tetrazolol[4,3-a]pyridin-3-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-72-0P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(4-methyl-pyridin-2-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-74-2P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(4-methyl-pyridin-2-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-75-3P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(3-methyl-isouquinolin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-76-5P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(3-methyl-isouquinolin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-77-6P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(3-methyl-isouquinolin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-78-5P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(3-methyl-isouquinolin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-79-6P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(1,5-naphthyridin-2-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-80-9P, 2-((1*f*,4)Diacepan-1-yl)-3-(2-butyln-1-yl)-5-[[(4-cyano-isouquinolin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-81-0P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(4-cyano-isouquinolin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-82-1P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(4-cyano-isouquinolin-1-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one 855789-83-2P, 2-(Piperazin-1-yl)-3-(2-butyln-1-yl)-5-[[(2,3,8-

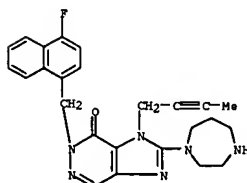
L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 855789-63-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-5-[(4-fluoro-1-naphthalenyl)methyl]-3,5-dihydro-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)



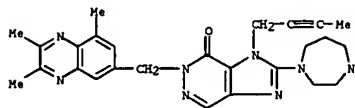
RN 855789-64-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-5-[(4-fluoro-1-naphthalenyl)methyl]-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro- (9CI)
(CA INDEX NAME)



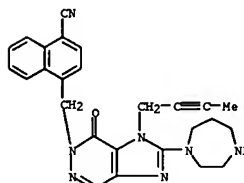
RN 855789-65-0 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 5-((4-bromo-1-naphthalenyl)methyl)-3-(2-

<12/22/2005>

L4	ANSWER 3 of 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued) trimethyl-quinoxalin-6-yl)methyl]-3,5-dihydro-imidazo[4,5-d]pyridazin-4-one RI: PAC (Pharmacological activity); SPN (Synthetic imidazo); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (prepa. of (homo)piperazinylimidazopyridazinones for treatment of diabetes mellitus)
RN	855789-60-5 CAPLUS
CN	4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-2-(hexahydro-1H-1,4-oxazin-1-yl)-3,5-dihydro-5-[[2,3,6-trimethyl-6-quinoxalyl)methyl]-19CL1 (CA INDEX NAME)

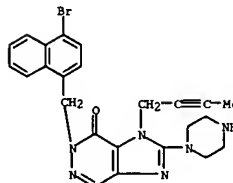


RN 855789-61-6 CAPLUS
CN 1-Naphthalenecarbonitrile, 4-([3-(2-butyrynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]- (9CI)
(CA INDEX NAME)

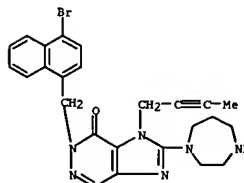


RN 855789-62-7 CAPLUS
CN 1-Naphthalenecarbonitrile, 4-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

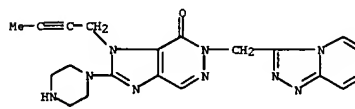
L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
butynyl)-3,5-dihydro-2-(1-piperazinyl)-(9CI) (CA INDEX NAME)



RN 855789-66-1 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 5-[(4-bromo-1-naphthalenyl)methyl]-3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro- (9CI) (CA INDEX NAME)



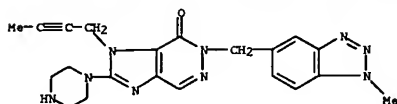
RN 855789-67-2 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(1,2,4-triazolo[4,3-a]pyridin-3-ylmethyl)- (9CI) (CA INDEX NAME)



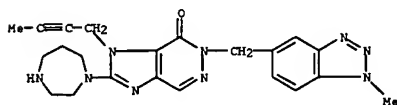
RN 855789-68-3 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(1-methyl-1H-benzotriazol-5-yl)methyl]-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)

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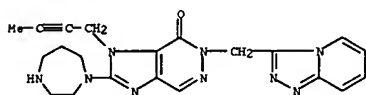
L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



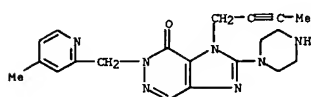
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 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro-5-[(1-methyl-1H-benzotriazol-5-yl)methyl]- (9CI) (CA INDEX NAME)



RN 855789-71-8 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro-5-[(1,2,4-triazolo[4,3-a]pyridin-3-yl)methyl]- (9CI) (CA INDEX NAME)

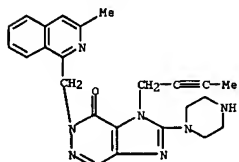


RN 855789-73-0 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-2-pyridinyl)methyl]-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)

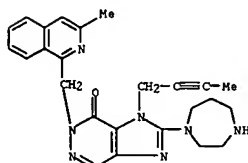


RN 855789-74-1 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-2-(hexahydro-1H-1,4-

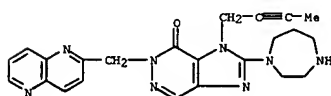
L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 855789-78-5 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro-5-[(3-methyl-1-isoquinolinyl)methyl]- (9CI) (CA INDEX NAME)

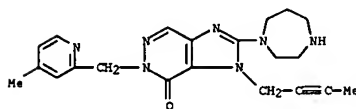


RN 855789-79-6 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro-5-[(1,5-naphthyridin-2-yl)methyl]- (9CI) (CA INDEX NAME)

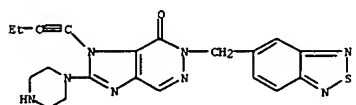


RN 855789-80-9 CAPLUS
 CN 4-isoquinolinecarbonitrile, 1-[[3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]- (9CI) (CA INDEX NAME)

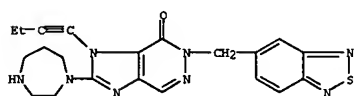
L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 diazepin-1-yl)-3,5-dihydro-5-[(4-methyl-2-pyridinyl)methyl]- (9CI) (CA INDEX NAME)



RN 855789-75-2 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 5-(2,1,3-benzothiadiazol-5-ylmethyl)-3-(1-butynyl)-3,5-dihydro-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)

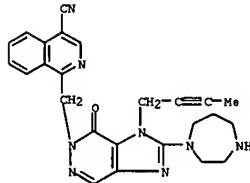


RN 855789-76-3 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 5-(2,1,3-benzothiadiazol-5-ylmethyl)-3-(1-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,5-dihydro- (9CI) (CA INDEX NAME)

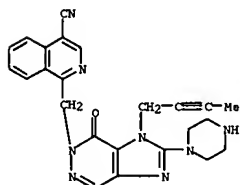


RN 855789-77-4 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(3-methyl-1-isoquinolinyl)methyl]-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)

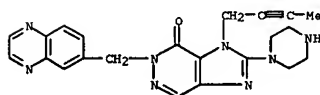
L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 855789-81-0 CAPLUS
 CN 4-isoquinolinecarbonitrile, 1-[[3-(2-butynyl)-2-(hexahydro-1H-1,4-diazepin-1-yl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]- (9CI) (CA INDEX NAME)

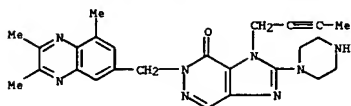


RN 855789-82-1 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(6-quinoxalylmethyl)- (9CI) (CA INDEX NAME)



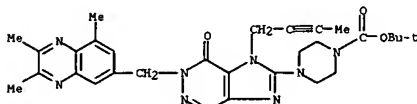
RN 855789-83-2 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-[(2,3,8-trimethyl-6-quinoxalyl)methyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



IT 855789-41-2F, 2-(4-tert-butyl-1H-imidazo[4,5-d]pyridazin-3-yl)-3-(2-butyn-1-yl)-5-[(2,3,8-trimethyl-6-quinoxalyl)methyl]-1H-imidazo[4,5-d]pyridazin-4-one
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of (homo)piperazinyimidazopyridazinones for treatment of diabetes mellitus)

RN 855789-41-2 CAPLUS
 CN 1-piperazinecarboxylic acid, 4-[1-(2-butynyl)-6,7-dihydro-7-oxo-6-[(2,3,8-trimethyl-6-quinoxalyl)methyl]-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:570533 CAPLUS
 DOCUMENT NUMBER: 143:97364

TITLE: Bicyclic imidazole derivatives, the preparation thereof and their use as pharmaceutical compositions
 Himmelbach, Frank; Langkopf, Elke; Eckhardt, Matthias; Haeu, Norbert; Tadayyon, Mohammad; Thomas, Leo

PATENT ASSIGNEE(S): Boehringer Ingelheim International G.m.b.H., Germany
 SOURCE: U.S. Pat. Appl. Publ., 17 pp.

CODEN: USXXCO
 DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

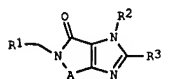
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005143377	A1	20050630	US 2004-18894	20041221
DE 10360835	A1	20050721	DE 2003-10360835	20031223
WO 2005063750	A1	20050714	WO 2004-EP14399	20041217

W: AE, AG, AL, AM, AT, AU, A2, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZH, ZW
 RW: BW, CH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPL. INFO.:

DE 2003-10360835 A 20031223
 US 2004-538684P P 20040123
 DE 2004-102004046530A 20040924

OTHER SOURCE(S): MARPAT 143:97364
 GI



AB The present invention relates to bicyclic imidazole compds. of general formula I wherein R1 to R3 and A are defined in claims (an example of a compound of the invention is 1-[(4-methyl-3-oxoquinazolin-2-yl)methyl]-3-methyl-7-(2-butyn-1-yl)-8-[(R)-3-aminopiperidin-1-yl]xanthine), the tautomers, the enantiomers, the stereoisomers, the mixts. thereof and the salts thereof, which have valuable pharmacol. properties, particularly an inhibiting effect on the activity of the enzyme dipeptidylpeptidase-IV (DPP-IV). In addition to the compds., pharmaceutical compns. containing I and a

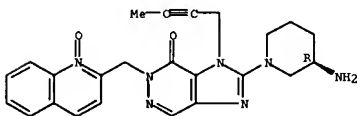
L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 process for prep. I are also claimed. A method of treating a disease chosen from type I and II diabetes mellitus, arthritis, obesity, allograft transplantation and calcitonin-induced osteoporosis using I is also claimed.

IT 856408-30-5F 856408-31-6F 856408-32-7F
 856408-33-8F 856408-34-9F 856408-35-0F
 856408-37-2F 856408-38-3F, 2-(Piperazin-1-yl)-3-(2-butyn-1-yl)-5-[(4-methyl-3-oxido-quinazolin-2-yl)methyl]-3,5-dihydroimidazo[4,5-d]pyridazin-4-one
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(candidate drug; preparation of bicyclic imidazole derivs. and their use in pharmaceutical compns. for treating various diseases)

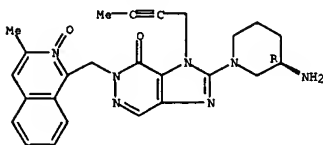
RN 856408-30-5 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(1-oxido-2-quinolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 856408-31-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(3-methyl-2-oxido-1-isoquinolinyl)methyl]- (9CI) (CA INDEX NAME)

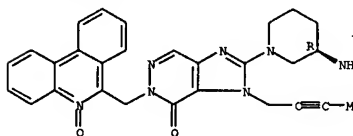
Absolute stereochemistry.



RN 856408-32-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(5-oxido-6-phenanthridinyl)methyl]- (9CI) (CA INDEX NAME)

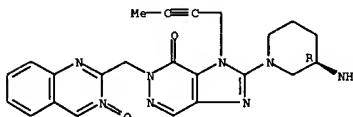
Absolute stereochemistry.

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



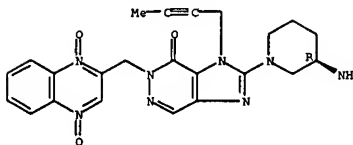
RN 856408-33-8 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(3-oxido-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 856408-34-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(1,4-dioxido-2-quinoxalyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



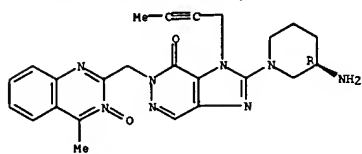
RN 856408-35-0 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-3-oxido-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

<12/22/2005>

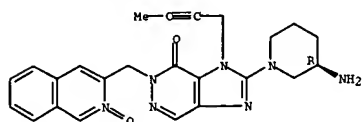
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L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

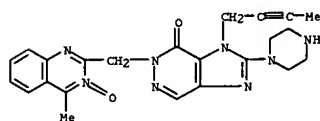


RN 856408-37-2 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(2-oxido-3-isoquinolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



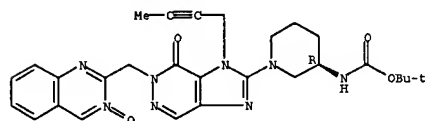
RN 856408-38-3 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-3-oxido-2-quinazolinyl)methyl]-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)



IT 856408-11-2P 856408-12-3P 856408-13-4P
 856408-14-5P 856408-15-6P 856408-17-8P
 856408-19-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of bicyclic imidazole derivs. and their use in pharmaceutical compns. for treating various diseases)
 RN 856408-11-2 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(1-oxido-2-

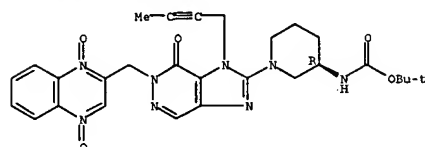
L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



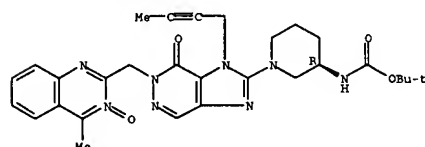
RN 856408-15-6 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(1,4-dioxido-2-quinoxaliny)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 856408-17-8 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(4-methyl-3-oxido-2-quinazolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



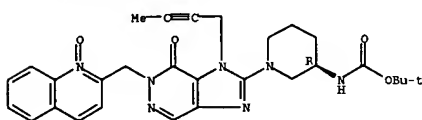
RN 856408-19-0 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(2-oxido-3-isoquinolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

<12/22/2005>

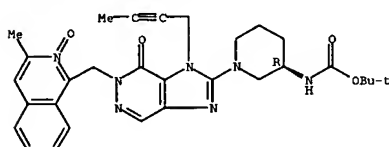
L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



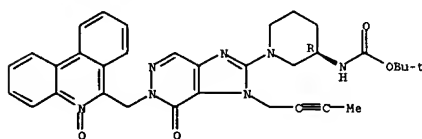
RN 856408-12-3 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(3-methyl-2-oxido-1-isoquinolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



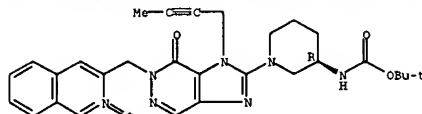
RN 856408-13-4 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(5-oxido-6-phenanthridinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 856408-14-5 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(3-oxido-2-quinazolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



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L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

ACCESSION NUMBER:
DOCUMENT NUMBER:2005:523288 CAPLUS
143:59991

TITLE: Preparation of fused imidazole derivatives such as dihydroimidazopyridazine, dihydroimidazolpyridine, hypoxanthine, and xanthine derivatives and preventives or therapeutic agents for multiple sclerosis

INVENTOR(S): Muramoto, Kenzo; Yasuda, Nobuyuki

PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan

SOURCE: PCT Int. Appl., 139 pp.
CODEN: PIXX22

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

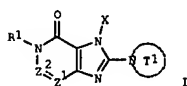
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 200503695	A1	20050616	WO 2004-JP14857	20041007
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RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, EG, KE, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.: JP 2003-405337 A 20031204

OTHER SOURCE(S): MARPAT 143:59991

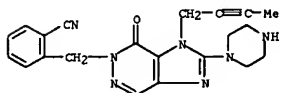
GI



AB There are provided preventives or therapeutic agents for multiple sclerosis, characterized by containing compds. represented by the following general formula (I) [ring T1 = (un)substituted 4- to 12-membered mono- or dicyclic heterocyclyl containing 1 or 2 N atoms; X = each (un)substituted

C1-6 alkyl, C2-6 alkenyl, C2-6 alkynyl, C6-10 aryl, 5- to 10-membered heteroaryl, C6-10 aryl-C1-6 alkyl, or 5- to 10-membered heteroaryl-C1-6 alkyl; the solid line accompanied by a dotted line between Z2 and Z1 = a single or double bond; when the bond is a single bond, Z1 = NR2 and Z2 = CO; when the bond is a double line, Z1, Z2 = N or CR2; R1, R2 = -AO-A1-A2 (wherein AO = a single bond, (un)substituted C1-6 alkylene; A1 = a single bond, S, O, S(O), S(O)2, O2C, CO2, NRA, CONRA, NRACO, SO2NRA, or NRASO2;

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



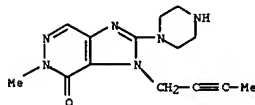
RN 854279-13-3 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635717-65-6

CHF C14 H18 N6 O



CH 2

CRN 76-05-1

CHF C2 H F3 O2



RN 854279-14-4 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(phenylmethoxy)methyl]-2-(1-piperazinyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635717-67-8

CHF C21 H24 N6 O2

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

A2, RA = H, halo, cyano, each (un)substituted guanidino, C1-6 alkyl, C3-8 cycloalkyl, C3-8 cycloalkenyl, C2-6 alkenyl, C2-6 alkynyl, C6-10 aryl, 5- to 10-membered heteroaryl, 4- to 8-membered heterocyclyl, or 5- to 10-membered heteroaryl-C1-6 alkyl, etc.); when Z2 = CR2, R1 and R2 together form a 5- to 7-membered ring, salts thereof, or hydrates of either. Thus, 7 mg 4-[(7-(2-butynyl)-2-chloro-1-(2-cyanobenzyl)-6-oxo-6,7-dihydro-1H-purin-8-yl)piperazine-1-carboxylic acid tert-Bu ester was dissolved in 0.2 mL 1-methyl-2-pyrrolidone, treated with 8 mg 3-hydroxypyridine-2-carboxamide and 8 mg K2CO3, stirred at 100° for 2 h, treated with 1 N aq. HCl, and extd. with EtOAc. The EtOAc ext. was concd., dissolved in CF3CO2H, and concd. to give, after purifn. using reversed-phase HPLC, 3-[[7-(2-butynyl)-1-(2-cyanobenzyl)-6-oxo-8-(piperazin-1-yl)-6,7-dihydro-1H-purin-2-yl]oxy]pyridine-2-carboxamide trifluoroacetate (II). II showed IC50 of 0.000890 µM against dipeptidyl peptidase IV (DPP-IV). 7-(2-Butynyl)-1,3-dimethyl-8-(piperazin-1-yl)-3,7-(piperazin-1-yl)-3,7-dihydro-2,6-dione, 2-[[7-(2-butynyl)-1-methyl-6-oxo-8-(piperazin-1-yl)-6,7-dihydro-1H-purin-2-yl]oxy]benzamide, and 2-(3-aminopiperidin-1-yl)-3-(2-butynyl)-5-methyl-3,5-dihydroimidazo[4,5-d]pyridazin-4-one trifluoroacetate inhibited the onset of allergic encephalomyelitis (EAE) in mice of human multiple sclerosis model.

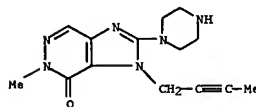
IT 635717-65-6P, 3-(2-Butynyl)-5-methyl-2-(piperazin-1-yl)-3,5-dihydroimidazo[4,5-d]pyridazin-4-one 635720-65-9P, 2-[[3-(2-Butynyl)-4-oxo-2-(piperazin-1-yl)-3,4-dihydroimidazo[4,5-d]pyridazin-5-yl]methyl]benzonitrile 854279-13-3P 854279-14-4P 854279-17-7P 854279-18-8P 854279-24-6P 854279-25-7P 854279-26-8P 854279-27-9P 854279-29-1P 854279-30-4P 854279-31-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of fused imidazole derivs. such as dihydroimidazopyridazine, dihydroimidazolpyridine, hypoxanthine, and xanthine derivs. and preventives or therapeutic agents for multiple sclerosis)

RN 635717-65-6 CAPLUS

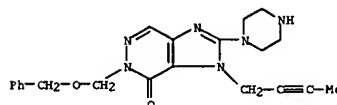
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)



RN 635720-65-9 CAPLUS

CN Benzonitrile, 2-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

CRN 76-05-1

CHF C2 H F3 O2



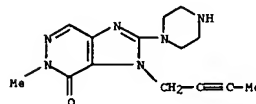
RN 854279-17-7 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)

CH 1

CRN 635717-65-6

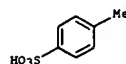
CHF C14 H18 N6 O



CH 2

CRN 104-15-4

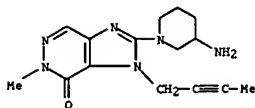
CHF C7 H8 O3 S



L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 RN 854279-18-8 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-methyl-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635717-75-8
 CMF C15 H20 N6 O



CH 2

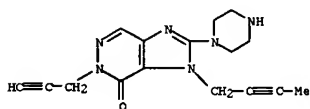
CRN 76-05-1
 CMF C2 H F3 O2



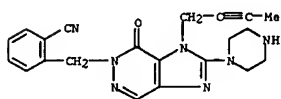
RN 854279-24-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(2-propynyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635720-47-7
 CMF C16 H18 N6 O



L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CMF C21 H21 N7 O



CH 2

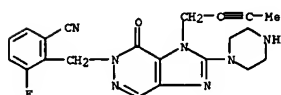
CRN 76-05-1
 CMF C2 H F3 O2



RN 854279-27-9 CAPLUS
 CN Benzonitrile, 2-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-3-fluoro-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635721-29-8
 CMF C21 H20 F N7 O



CH 2

CRN 76-05-1
 CMF C2 H F3 O2



<12/22/2005>

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CH 2

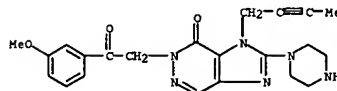
CRN 76-05-1
 CMF C2 H F3 O2



RN 854279-25-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[2-(3-methoxyphenyl)-2-oxoethyl]-2-(1-piperazinyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635720-63-7
 CMF C22 H24 N6 O3



CH 2

CRN 76-05-1
 CMF C2 H F3 O2



RN 854279-26-8 CAPLUS
 CN Benzonitrile, 2-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

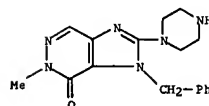
CRN 635720-65-9

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 854279-29-1 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-methyl-3-(phenylethyl)-2-(1-piperazinyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635721-55-0
 CMF C17 H20 N6 O



CH 2

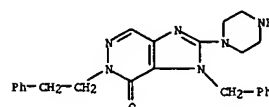
CRN 76-05-1
 CMF C2 H F3 O2



RN 854279-30-4 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-(2-phenylethyl)-3-(phenylethyl)-2-(1-piperazinyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635721-59-4
 CMF C24 H26 N6 O



CH 2

CRN 76-05-1

Habte

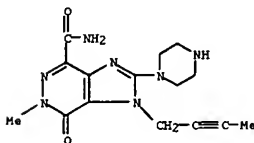
L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CNF C2 H F3 O2



RN 854279-31-5 CAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-4-carboxamide, 1-(2-butynyl)-6,7-dihydro-6-methyl-7-oxo-2-(1-piperazinyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CH 1

CRN 635722-01-9
CNF C15 H19 N7 O2



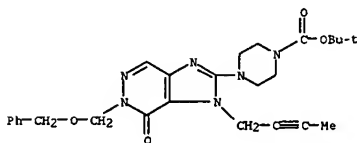
CH 2

CRN 76-05-1
CNF C2 H F3 O2

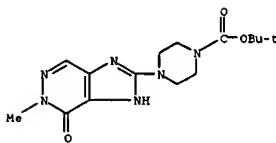


IT 635722-47-3P, 4-[1-(2-Butynyl)-6-methyl-7-oxo-6,7-dihydro-1H-imidazo[4,5-d]pyridazin-2-yl]piperazine-1-carboxylic acid tert-butyl ester
635722-77-9P, 4-[6-Benzyloxymethyl-7-oxo-6,7-dihydro-1H-imidazo[4,5-d]pyridazin-2-yl]piperazine-1-carboxylic acid tert-butyl ester
635722-78-0P, 4-[6-Benzyloxymethyl-1-(2-butynyl)-7-oxo-6,7-dihydro-1H-imidazo[4,5-d]pyridazin-2-yl]piperazine-1-carboxylic acid tert-butyl ester
635722-82-6P, 4-(6-Methyl-7-oxo-6,7-dihydro-1H-imidazo[4,5-d]pyridazin-2-yl)piperazine-1-carboxylic acid tert-butyl ester
635723-02-3P, 4-(1-Benzyl-6-benzyloxymethyl-7-oxo-6,7-dihydro-1H-

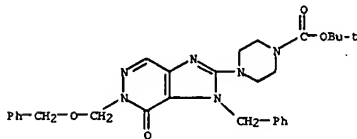
L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635722-82-6 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-(4,5-dihydro-5-methyl-4-oxo-1H-imidazo[4,5-d]pyridazin-2-yl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 635723-02-3 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[6,7-dihydro-7-oxo-6-(phenylmethoxymethyl)-1-(phenylmethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

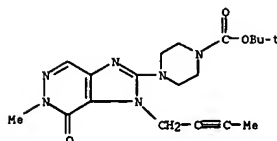


RN 635723-14-7 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(aminocarbonyl)-1-(2-butynyl)-6,7-dihydro-6-methyl-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

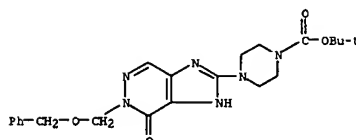
L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
imidazo[4,5-d]pyridazin-2-yl]piperazine-1-carboxylic acid tert-butyl ester
635723-14-7P, 4-[1-(2-Butynyl)-4-carbamoyl-6-methyl-7-oxo-6,7-dihydro-1H-imidazo[4,5-d]pyridazin-2-yl]piperazine-1-carboxylic acid tert-butyl ester
635723-79-4P, [1-(6-Methyl-7-oxo-6,7-dihydro-1H-imidazo[4,5-d]pyridazin-2-yl)piperidin-3-yl]carbamic acid tert-butyl ester
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(Preparation of fused imidazole derivs. such as dihydroimidazopyridazine, dihydroimidzolpyridine, hypoxanthine, and xanthine derivs. and preventives or therapeutic agents for multiple sclerosis)

RN 635722-47-3 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[1-(2-butynyl)-6,7-dihydro-6-methyl-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

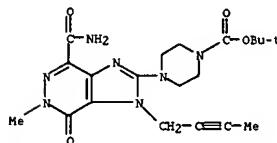


RN 635722-77-9 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4,5-dihydro-4-oxo-5-(phenylmethoxymethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

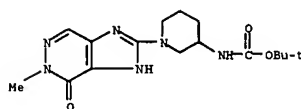


RN 635722-78-0 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[1-(2-butynyl)-6,7-dihydro-7-oxo-6-(phenylmethoxymethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

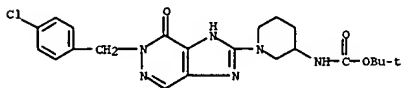


RN 635723-79-4 CAPLUS
CN Carbamic acid, [1-(4,5-dihydro-5-methyl-4-oxo-1H-imidazo[4,5-d]pyridazin-2-yl)-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2005:245650 CAPLUS
 DOCUMENT NUMBER: 142:463689
 TITLE: Synthesis of Purines and Other Fused Imidazoles from Acyclic Amidines and Guanidines
 AUTHOR(S): Szczepankiewicz, Bruce G.; Rohde, Jeffrey J.; Kurukulasuriya, Ravi
 CORPORATE SOURCE: Metabolic Disease Research, Global Pharmaceutical Research and Development Organization, Abbott Laboratories, Abbott Park, IL, 60064-6098, USA
 SOURCE: Organic Letters (2005), 7(9), 1833-1835
 CODEN: ORLEF7; ISSN: 1523-7060
 PUBLISHER: American Chemical Society
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 142:463689
 AB Purines, xanthenes, and other fused imidazoles can be prepared from amidines or guanidines, with retrosynthetic disconnection at the ring fusion. Ring closure proceeds using Cu(I), with no special ligands required. The method allows for easy modification of the heterocyclic nucleus and is tolerant of functionality pendant to the ring system.
 IT 651608-63-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of purines and other fused imidazoles from acyclic amidines and guanidines)
 RN 851608-63-4 CAPLUS
 CN Carbamic acid, [1-[5-[(4-chlorophenyl)methyl]-4,5-dihydro-4-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

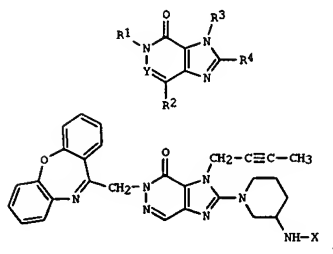


REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 2004:1127381 CAPLUS
 DOCUMENT NUMBER: 142:74585
 TITLE: Preparation of imidazopyridazinones and related compounds as dipeptidyl peptidase IV (DPP-IV) inhibitors for the treatment of diabetes
 INVENTOR(S): Eckhardt, Matthias; Haeu, Norbert; Langkopf, Elke; Himmelsbach, Frank; Kauffmann-Hefner, Iris; Tadayyon, Mohammad; Mark, Michael
 PATENT ASSIGNER(S): Boehringer Ingelheim International GmbH, Germany; Boehringer Ingelheim Pharma GmbH & Co. KG
 SOURCE: PCT Int. Appl., 106 pp.
 CODEN: P1XXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004/11051	A1	20041223	WO 2004-EP6303	20040611
W: AE, AG, AL, AM, AT, AU, A2, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MY, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TH, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZH, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, CA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10327439	A1	20050105	DE 2003-10327439	20030618
US 2005026921	A1	20050203	US 2004-865719	20040610
PRIORITY APPL. INFO.:			DE 2003-10327439	A 20030618
			US 2003-487309P	P 20030715
OTHER SOURCE(S):		MARPAT 142:74585		
GI				

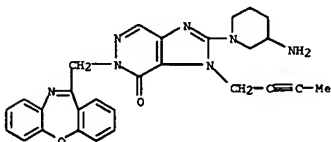
L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



AB Title compds. I [R1 = alkyl substituted 3,4-dihydroquinolinyl, 3,4-dihydroisoquinolinyl, 1,4-dihydroquinazolinyl, etc.] R2 = H, F, Cl, etc.; R3 = (un)substituted alkyl, e.g., cycloalkyl, cycloalkenyl, aryl, etc.; R4 = (un)substituted azetidin-1-yl, pyrrolidin-1-yl; Y = N, C-R5; R5 = H, alkyl] and their pharmaceutically acceptable salts and formulations were prepared. For example, TFA mediated deprotection of Boc-amine II (X = Boc) afforded claimed imidazopyridazinone II (X = H) in 63% yield. In dipeptidyl peptidase IV (DPP-IV) inhibition assays, 8-examples of compds. I exhibited IC50 values ranging from 3-58 nM, e.g., the IC50 value of imidazopyridazinone II (X = H) was 14 nM. Compds. I are claimed to be useful for the treatment of type I and type II diabetes mellitus.

IT 813462-54-3P 813462-55-4P 813462-56-5P
 813462-57-6P 813462-58-7P 813462-59-8P
 813462-60-1P 813462-61-2P 813462-62-3P
 813462-63-4P 813462-64-5P
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of imidazopyridazinones and related compds. as dipeptidyl peptidase IV (DPP-IV) inhibitors for the treatment of diabetes)

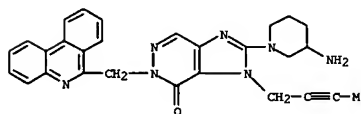
RN 813462-54-3 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-(dibenz[b,f][1,4]oxazepin-11-ylmethyl)-3,5-dihydro- (9CI) (CA INDEX NAME)



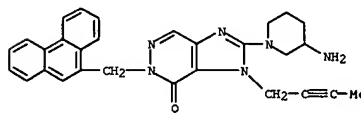
<12/22/2005>

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 813462-55-4 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-(6-phenanthridinylmethyl)- (9CI) (CA INDEX NAME)

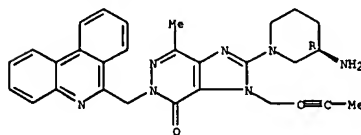


RN 813462-56-5 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-(9-phenanthrenylmethyl)- (9CI) (CA INDEX NAME)



RN 813462-57-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-7-methyl-5-(6-phenanthridinylmethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

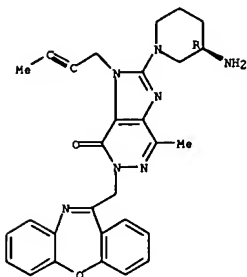


RN 813462-58-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-(dibenz[b,f][1,4]oxazepin-11-ylmethyl)-3,5-dihydro-7-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

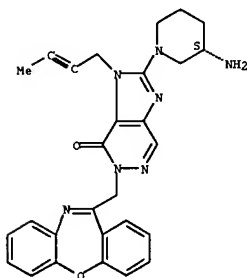
Habte

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



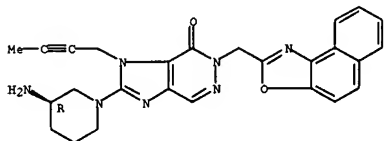
RN 813462-59-8 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3S)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-(dibenz[b,f][1,4]oxazepin-11-ylmethyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



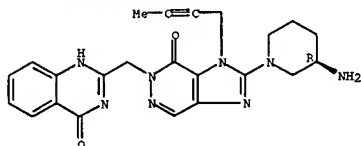
RN 813462-60-1 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-(dibenz[b,f][1,4]oxazepin-11-ylmethyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 813462-63-4 CAPLUS
 CN 4(1H)-Quinazolinone, 2-[[2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

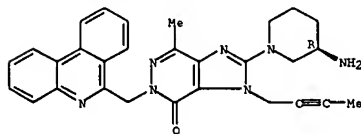


RN 813462-64-5 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-7-methyl-5-(6-phenanthridinylmethyl)-, trifluoroacetate (9CI) (CA INDEX NAME)

CM 1

CRN 813462-57-6
 CMF C29 H29 N7 O

Absolute stereochemistry.



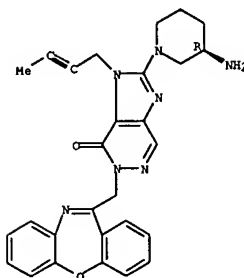
CM 2

CRN 76-05-1

<12/22/2005>

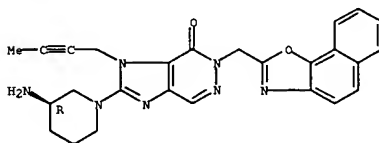
L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



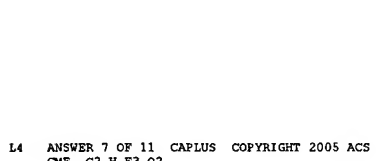
RN 813462-61-2 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-(naphth[2,1-d]oxazol-2-ylmethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 813462-62-3 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-(naphth[2,1-d]oxazol-2-ylmethyl)- (9CI) (CA INDEX NAME)

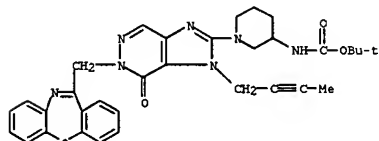
Absolute stereochemistry.



L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

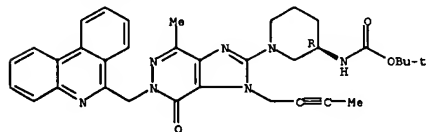


IT 813462-65-6P 813462-66-7P 813462-67-8P
 813462-71-4P 813462-74-7P 813462-75-8P
 813462-76-9P 813462-77-0P 813462-87-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of imidazopyridazinones and related compds. as dipeptidyl peptidase IV (DPP-IV) inhibitors for the treatment of diabetes)
 RN 813462-65-6 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-4-methyl-7-oxo-6-(6-phenanthridinylmethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 813462-66-7 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-4-methyl-7-oxo-6-(6-phenanthridinylmethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

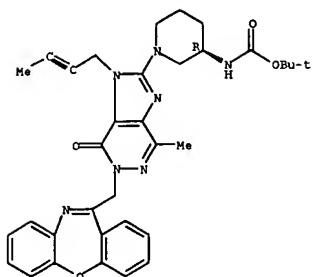


RN 813462-67-8 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-4-methyl-7-oxo-6-(6-phenanthridinylmethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

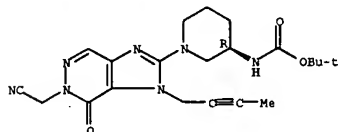
Habte

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 813462-71-4 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6-(cyanomethyl)-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

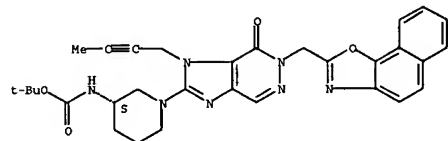


RN 813462-74-7 CAPLUS
 CN Carbamic acid, [(3S)-1-[1-(2-butynyl)-6-(dibenz[b,f][1,4]oxazepin-11-ylmethyl)-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

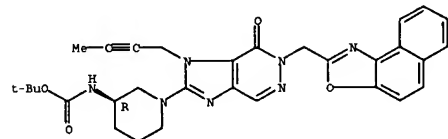
L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



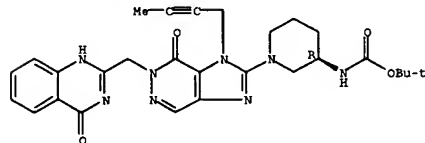
RN 813462-77-0 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6-(naphth[1,2-d]oxazol-2-ylmethyl)-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



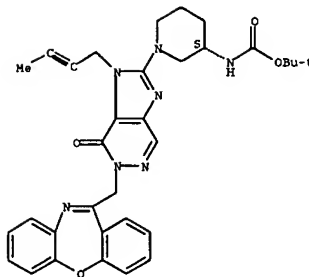
RN 813462-87-2 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6-[(1,4-dihydro-4-oxo-2-quinazolinyl)methyl]-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



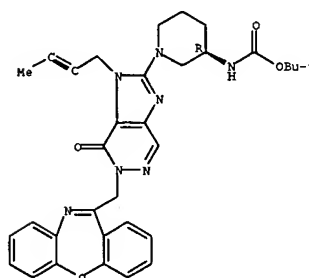
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 813462-75-8 CAPLUS
 CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6-(dibenz[b,f][1,4]oxazepin-11-ylmethyl)-6,7-dihydro-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 813462-76-9 CAPLUS
 CN Carbamic acid, [(3S)-1-[1-(2-butynyl)-6-(naphth[2,1-d]oxazol-2-ylmethyl)-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI)

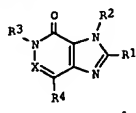
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:493705 CAPLUS
 DOCUMENT NUMBER: 141:54352
 TITLE: Production and use of novel substituted imidazopyridinones and imidazopyridazones as medicaments
 INVENTOR(S): Haevel, Norbert; Himmelsbach, Frank; Langkopf, Elke; Eckhardt, Matthias; Maier, Roland; Mark, Michael; Tadeyyon, Mohammad; Kauffmann-Hefner, Iris
 PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G., Germany
 SOURCE: PCT Int. Appl., 123 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: German
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

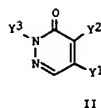
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
DE 10256264	A1	20040624	DE 2002-10256264	20021203
DE 10309927	A1	20040916	DE 2003-10309927	20030307
US 2005020574	A1	20050127	US 2003-726214	20031202
CA 2508233	AA	20040617	CA 2003-2508233	20031203
EP 1569936	A1	20050907	EP 2003-789123	20031203
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PRIORITY APPLN. INFO.:				
DE 2002-10256264 A 20021203				
DE 2003-10309927 A 20030307				
US 2002-437438P P 20021230				
US 2003-456598P P 20030321				
WO 2003-EP13648 W 20031203				
OTHER SOURCE(S): MARPAT 141:54352				
GI				

own work

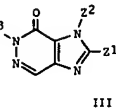
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



I



II

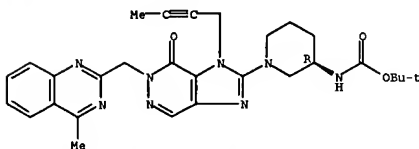


III

AB The invention relates to substituted imidazo-pyridinones and imidazo-pyridazinones I [R1 = 5- to 7-membered cycloalkylenimino (optionally substituted with C1-3-alkyl), 6- to 7-membered cycloalkylenimino (4-methylene substituted, to 7-membered cycloalkylamino, etc.), R2 = CH2Ph (Ph, Cl-, Br-, CN-substituted Ph), (un)branched C3-8-alkenyl, C3-5-alkynyl, C3-7-cycloalkylmethyl, C5-7-cycloalkylmethyl, urylmethyl, thienylmethyl, pyrrolylmethyl, thiazolylmethyl, R3 = (un)branched C1-6-alkyl, C1-6-haloalkyl, C1-6-cyanoalkyl, CHMePh, CH2CH(OH)Ph, CH2COPh (optionally substituted Ph), 3-methyl-2-oxo-2,3-dihydrobenzoxazolyl)carbonylmethyl, thienylcarbonylmethyl, mono- or bicyclic heteroaryl-(C1-6-alkyl); R4 = H, C1-3-alkyl; X = N, CR5; R5 = H, Me; etc.), the tautomers thereof, the stereoisomers thereof, the mixts. thereof and the salts thereof, which have valuable pharmacol. properties, especially an inhibitory effect on the activity of the enzyme dipeptidylpeptidase-IV (DPP-IV). Thus, 1-HCl [R1 = 3-aminopiperidino, R2 = 2-butynyl, R3 = (1-naphthyl)methyl, R4 = H, X = N] was prepared from 4,5-dichloro-3-hydroxy-2H-pyridazine (II; Y1 = Y2 = Cl, Y3 = H) via N-alkylation with 1-(chloromethyl)naphthalene to give II [Y1 = Y2 = Cl, Y3 = (1-naphthyl)methyl], hydrolysis-nitration to II [Y1 = OH, Y2 = NO2, Y3 = (1-naphthyl)methyl], amination to give II [Y1 = NH2, Y2 = NO2, Y3 = (1-naphthyl)methyl], reduction to the 4,5-diamino derivative, cyclocondensation with thioacarbonyldiimidazole to give imidazopyridazone III [Z1 = SH, Z2 = H, Z3 = (1-naphthyl)methyl], S-methylation to III [Z1 = SMe, Z2 = H, Z3 = (1-naphthyl)methyl], N-alkylation with BrCH2C.tpbond.CMe to give III [Z1 = SMe, Z2 = CH2C.tpbond.CMe, Z3 = (1-naphthyl)methyl]; S-oxidation to give III [Z1 = SO2Me, Z2 = CH2C.tpbond.CMe, Z3 = (1-naphthyl)methyl], amination with 3-(Boc-amino)piperidine and deprotection. The inhibitory effect of I [R1 = 3-aminopiperidino, R2 = 2-butynyl, R3 = (1-naphthyl)methyl, R4 = H] on the activity of the enzyme dipeptidylpeptidase-IV (DPP-IV) was tested [IC50 = 13 nM]. Formulations containing I in the forms of dragees, tablets, ampuls, hard-gel capsules, suppositories and suspensions are presented.

IT 705280-44-0P 705280-47-3P 705280-64-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

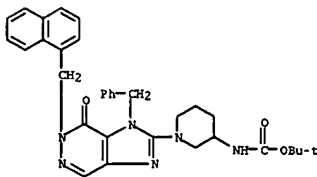
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



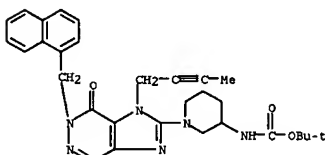
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705280-79-1P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation and use of novel substituted imidazopyridinones and imidazopyridazines as inhibitors of dipeptidylpeptidase IV)
RN 705279-79-4 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3,5-dihydro-5-(1-naphthalenylmethyl)-3-(phenylmethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
(Reactant or reagent)
(prepn. and N-deprotection of; prepn. and use of novel substituted imidazopyridinones and imidazopyridazines as inhibitors of dipeptidylpeptidase IV)

RN 705280-44-0 CAPLUS
CN Carbamic acid, [1-[6,7-dihydro-6-(1-naphthalenylmethyl)-7-oxo-1-(phenylmethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



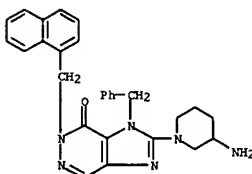
RN 705280-47-3 CAPLUS
CN Carbamic acid, [1-[1-(2-butynyl)-6,7-dihydro-6-(1-naphthalenylmethyl)-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 705280-64-4 CAPLUS
CN Carbamic acid, [(3R)-1-[1-(2-butynyl)-6,7-dihydro-6-[(4-methyl-2-quinazolinyl)methyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

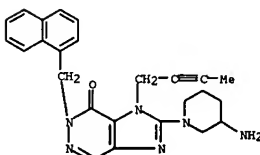
Absolute stereochemistry.

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



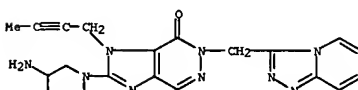
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RN 705279-80-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-(1-naphthalenylmethyl)-, monohydrochloride (9CI) (CA INDEX NAME)

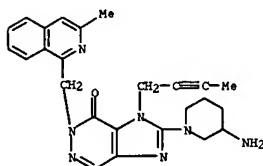


● HCl

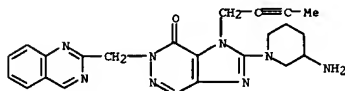
RN 705279-83-0 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-(1,2,4-triazolo[4,3-a]pyridin-3-ylmethyl)- (9CI) (CA INDEX NAME)



L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
 RN 705279-84-1 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butenyl)-3,5-dihydro-5-[(3-methyl-1-isoquinolinyl)methyl]- (9CI) (CA INDEX NAME)

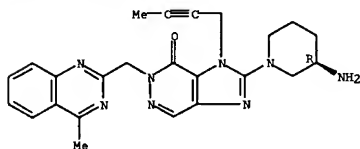


RN 705279-87-4 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butenyl)-3,5-dihydro-5-(2-quinazolinylmethyl)- (9CI) (CA INDEX NAME)



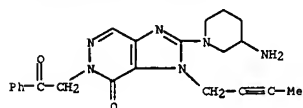
RN 705279-88-5 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butenyl)-3,5-dihydro-5-[(4-methyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

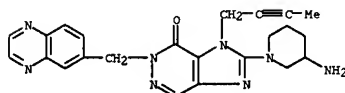


RN 705279-89-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-5-(1,2-benzisothiazol-3-ylmethyl)-3-(2-butenyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

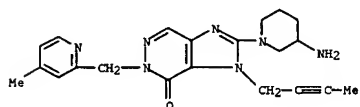
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)



RN 705279-94-3 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butenyl)-3,5-dihydro-5-(6-quinoxalinylmethyl)- (9CI) (CA INDEX NAME)

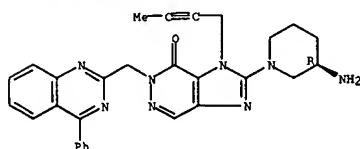


RN 705279-95-4 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butenyl)-3,5-dihydro-5-[(4-methyl-2-pyridinyl)methyl]- (9CI) (CA INDEX NAME)



RN 705279-96-5 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butenyl)-3,5-dihydro-5-[(4-phenyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

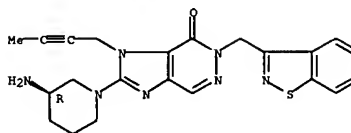


RN 705279-97-6 CAPLUS

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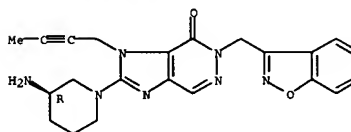
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
 NAME)

Absolute stereochemistry.



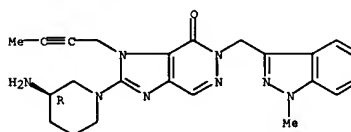
RN 705279-90-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-5-(1,2-benzisoxazol-3-ylmethyl)-3-(2-butenyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705279-92-1 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butenyl)-3,5-dihydro-5-[(1-methyl-1H-indazol-3-yl)methyl]- (9CI) (CA INDEX NAME)

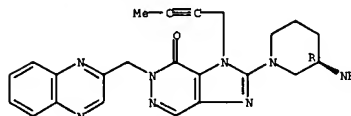
Absolute stereochemistry.



RN 705279-93-2 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butenyl)-3,5-dihydro-5-(2-oxo-2-phenylethyl)- (9CI) (CA INDEX NAME)

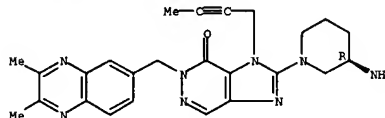
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS ON STN (Continued)
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butenyl)-3,5-dihydro-5-(2-quinoxalinylmethyl)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



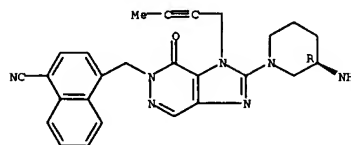
RN 705279-98-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butenyl)-5-[(2,3-dimethyl-6-quinoxalinylmethyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705279-99-8 CAPLUS
 CN 1-Naphthalenecarbonitrile, 4-[[2-[(3R)-3-amino-1-piperidinyl]-3-(2-butenyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]- (9CI) (CA INDEX NAME)

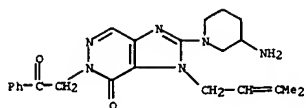
Absolute stereochemistry.



RN 705280-01-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3,5-dihydro-3-(3-methyl-2-butenyl)-5-(2-oxo-2-phenylethyl)- (9CI) (CA INDEX NAME)

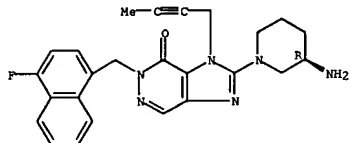
Habte

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 705280-03-1 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(4-fluoro-1-naphthalenyl)methyl]-3,5-dihydro-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

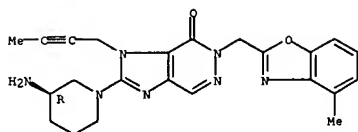


● HCl

RN 705280-04-2 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(6-methyl-2-benzoxazolyl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

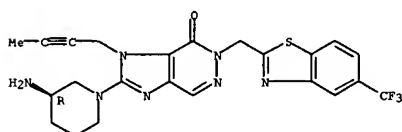
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● HCl

RN 705280-07-5 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(5-(trifluoromethyl)-2-benzothiazolyl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

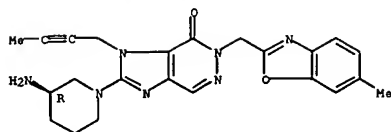


● HCl

RN 705280-08-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(5-methyl-2-benzoxazolyl)methyl]-3,5-dihydro-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

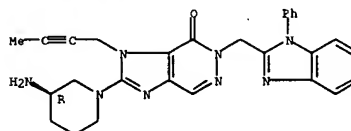
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● HCl

RN 705280-05-3 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(1-phenyl-1H-benzimidazol-2-yl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

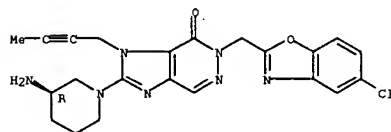


● HCl

RN 705280-06-4 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-2-benzoxazolyl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

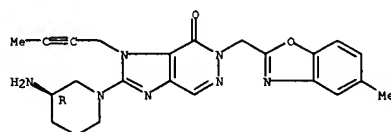
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● HCl

RN 705280-09-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(5-methyl-2-benzoxazolyl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

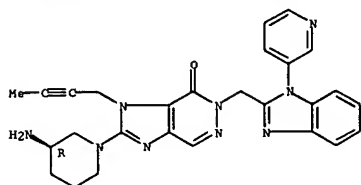


● HCl

RN 705280-10-0 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(1-(3-pyridinyl)-1H-benzimidazol-2-yl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

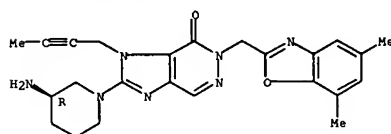
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



● HCl

RN 705280-11-1 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(5,7-dimethyl-2-benzoxazolyl)methyl]-3,5-dihydro-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.



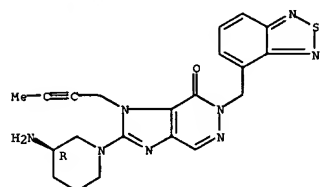
● HCl

RN 705280-12-2 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(4-chloro-1-naphthalenyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

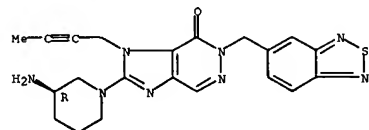
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-5-(2,1,3-benzothiadiazol-4-ylmethyl)-3-(2-butynyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705280-16-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-5-(2,1,3-benzothiadiazol-4-ylmethyl)-3-(2-butynyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

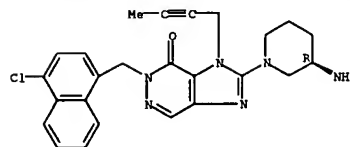
Absolute stereochemistry.



RN 705280-17-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-[(2-chlorophenyl)methyl]-5-(3-methyl-1-isoquinolinyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

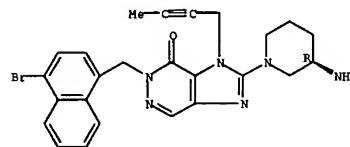
Absolute stereochemistry.

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 705280-13-3 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-5-[(4-bromo-1-naphthalenyl)methyl]-3-(2-butynyl)-3,5-dihydro-, monohydrochloride (9CI) (CA INDEX NAME)

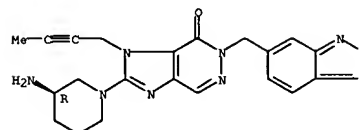
Absolute stereochemistry.



● HCl

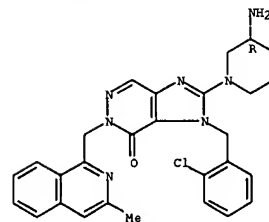
RN 705280-14-4 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-5-(2,1,3-benzoxadiazol-5-ylmethyl)-3-(2-butynyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



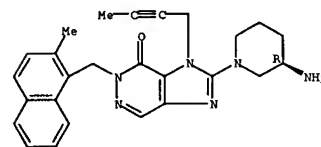
RN 705280-15-5 CAPLUS

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



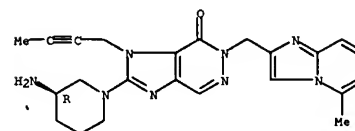
RN 705280-18-8 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(2-methyl-1-naphthalenyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705280-19-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(5-methylimidazo[1,2-a]pyridin-2-yl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

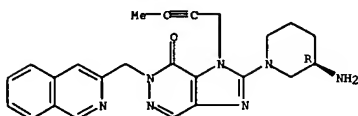


RN 705280-20-2 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(3-isoquinolinyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

<12/22/2005>

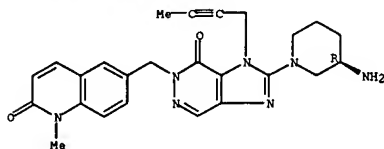
Habte

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
Absolute stereochemistry.



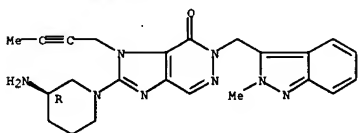
RN 705280-21-3 CAPLUS
CN 2-(1H)-Quinolinone, 6-[[2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-1-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705280-22-4 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(2-methyl-2H-indazol-3-yl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

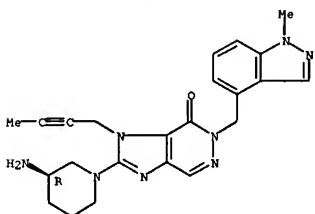


RN 705280-23-5 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(4-phenyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

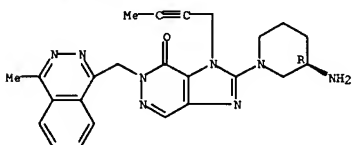
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



RN 705280-27-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-1-phthalazinyl)methyl]- (9CI) (CA INDEX NAME)

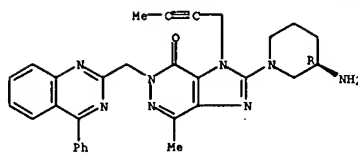
Absolute stereochemistry.



RN 705280-28-0 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[2-(2,3-dihydro-3-methyl-2-oxo-4-benzoxazolyl)-2-oxoethyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

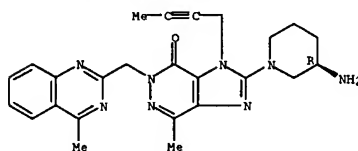
Absolute stereochemistry.

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



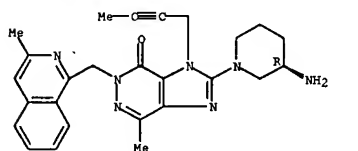
RN 705280-24-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-7-methyl-5-[(4-methyl-2-quinazolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



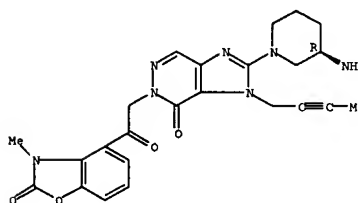
RN 705280-25-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-7-methyl-5-[(3-methyl-1-isoquinolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



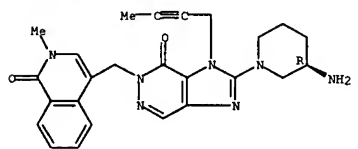
RN 705280-26-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(1-methyl-1H-indazol-4-yl)methyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



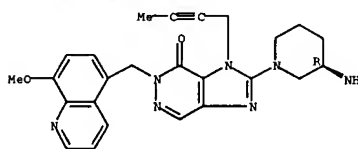
RN 705280-29-1 CAPLUS
CN 1(2H)-Isoquinolinone, 4-[[2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,4-dihydro-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-2-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705280-30-4 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(8-methoxy-5-quinolinyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

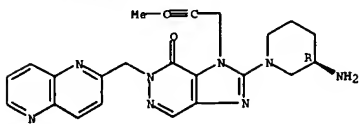


RN 705280-31-5 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-(1,5-naphthyridin-2-ylmethyl)- (9CI) (CA INDEX NAME)

Hahte

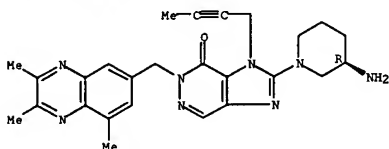
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



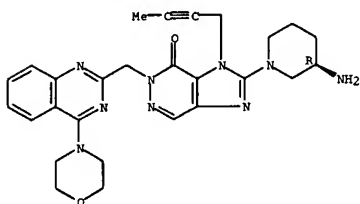
RN 705280-32-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(2,3,8-trimethyl-6-quinoxaliny)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

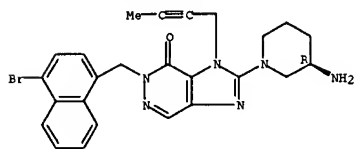


RN 705280-33-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(4-(4-morpholinyl)-2-quinazoliny)methyl]- (9CI) (CA INDEX NAME)

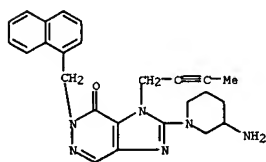
Absolute stereochemistry.



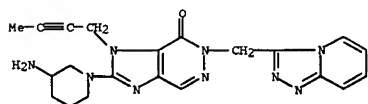
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 705280-67-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-[(1-naphthalenyl)methyl]- (9CI) (CA INDEX NAME)



RN 705280-68-8 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-[(1,2,4-triazolo[4,3-a]pyridin-3-yl)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)



● HCl

RN 705280-69-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-2-pyridinyl)methyl]-, dihydrochloride (9CI) (CA INDEX NAME)

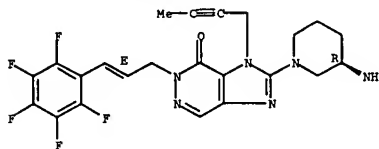
<12/22/2005>

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 705280-34-8 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(2E)-3-(pentafluorophenyl)-2-propenyl]- (9CI) (CA INDEX NAME)

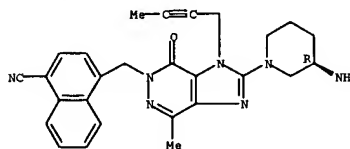
Absolute stereochemistry.
 Double bond geometry as shown.



RN 705280-35-9 CAPLUS

CN 1-Naphthalenecarbonitrile, 4-[[2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,4-dihydro-7-methyl-4-oxo-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



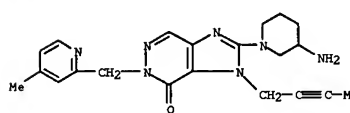
RN 705280-66-6 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-5-[(4-bromo-1-naphthalenyl)methyl]-3-(2-butynyl)-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

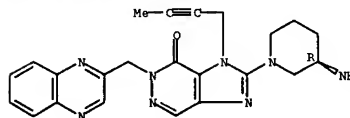


● 2 HCl

RN 705280-70-2 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(2-quinoxaliny)methyl]-, monohydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

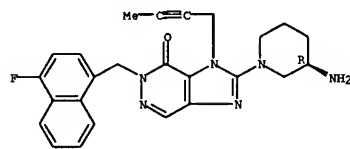


● HCl

RN 705280-71-3 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(4-fluoro-1-naphthalenyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



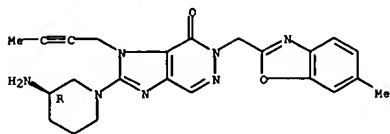
RN 705280-72-4 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(6-methyl-2-benzoxazolyl)methyl]- (9CI) (CA INDEX NAME)

HAbte

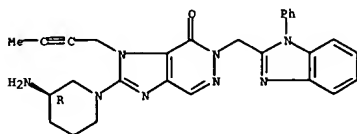
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



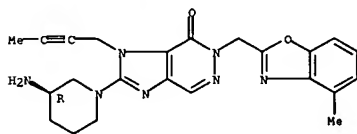
RN 705280-73-5 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(1-phenyl-1H-benzimidazol-2-yl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



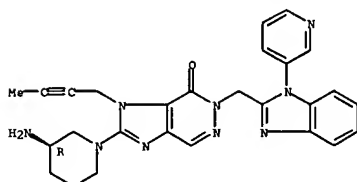
RN 705280-74-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(4-methyl-2-benzoxazolyl)methyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



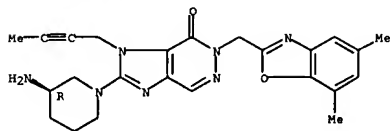
RN 705280-75-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-3,5-dihydro-5-[(5-(trifluoromethyl)-2-benzothiazolyl)methyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 705280-79-1 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(5,7-dimethyl-2-benzoxazolyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

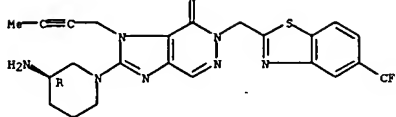
Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

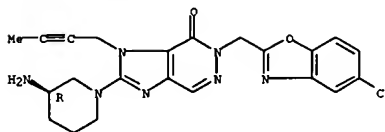
L4 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

Absolute stereochemistry.



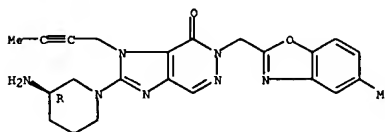
RN 705280-76-8 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(5-chloro-2-benzoxazolyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705280-77-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(5-methyl-2-benzoxazolyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 705280-78-0 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[(3R)-3-amino-1-piperidinyl]-3-(2-butynyl)-5-[(5-methyl-2-benzoxazolyl)methyl]-3,5-dihydro- (9CI) (CA INDEX NAME)

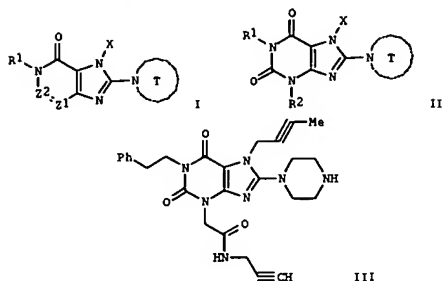
Absolute stereochemistry.

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:28778 CAPLUS
 DOCUMENT NUMBER: 140:303701
 TITLE: Preparation of piperazine derivatives as dipeptidyl peptidase IV inhibitors
 INVENTOR(S): Yasuda, Nobuyuki; Yamazaki, Kazuto
 PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 302 pp.
 CODEN: PIXXKZ
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004028524	A1	20040408	WO 2003-JP12075	20030922
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BE, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2498423	AA	20040408	CA 2003-2498423	20030922
EP 1557165	A1	20050727	EP 2003-798438	20030922
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
BR 2003014655	A	20050802	BR 2003-14655	20030922
NO 2005002018	A	20050622	NO 2005-2018	20050425
PRIORITY APPLM. INFO.:			JP 2002-280137	A 20020926
			JP 2003-117927	A 20030423
			WO 2003-JP12075	W 20030922
OTHER SOURCE(S):		MARPAT 140:303701		
GI				

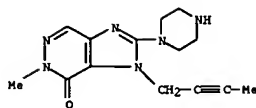
L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



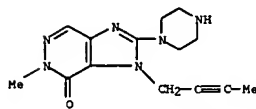
AB The title compds. I and II [wherein ring T = (un)substituted heterocyclyl; X = (un)substituted alkyl, alkenyl, alkynyl, aryl, heteroaryl, arylalkyl, or heteroarylalkyl; Z1 and Z2 = independently W or (un)substituted CH; R1 and R2 = independently H, (un)substituted alkyl, etc.] or salts or hydrates thereof are prepared as dipeptidyl peptidase (DPP) IV inhibitors in combination with biguanide. For example, the compound III-HCl was prepared in a multi-step synthesis. III-HCl showed inhibitory activity with IC50 of 0.472 nM against DPP IV in pig. I are useful for the treatment of diabetes, obesity, hyperlipidemia, gastrointestinal disturbance, etc.

IT 635717-65-6P 635717-66-7P 635717-68-9P
635717-75-8P 635717-76-9P 635720-48-8P
635720-64-8P 635720-65-9P 635720-66-0P
635721-30-1P 635721-56-1P 635721-60-7P
635722-02-0P 635722-43-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(drug candidate; preparation of piperazine derivs. as dipeptidyl peptidase IV inhibitors)
RN 635717-65-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635717-66-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
CH 1
CRN 635717-65-6
CHF C14 H18 N6 O

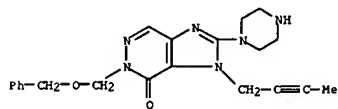


CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635717-68-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(phenylmethoxy)methyl]-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
CH 1
CRN 635717-67-8
CHF C21 H24 N6 O2

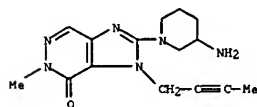
L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



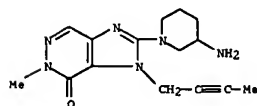
CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635717-75-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-methyl- (9CI) (CA INDEX NAME)



RN 635717-76-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
CH 1
CRN 635717-75-8
CHF C15 H20 N6 O



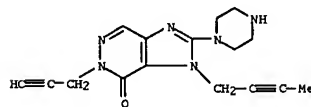
<12/22/2005>

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635720-48-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(2-propynyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
CH 1
CRN 635720-47-7
CHF C16 H18 N6 O



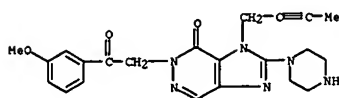
CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635720-64-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(2-methoxyphenyl)-2-oxoethyl]-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
CH 1
CRN 635720-63-7
CHF C22 H24 N6 O3

Habte

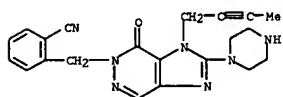
L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635720-65-9 CAPLUS
CN Benzonitrile, 2-[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)



RN 635720-66-0 CAPLUS
CN Benzonitrile, 2-[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

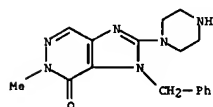
CRN 635720-65-9
CHF C21 H21 N7 O

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635721-56-1 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-methyl-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-55-0
CHF C17 H20 N6 O

CH 2

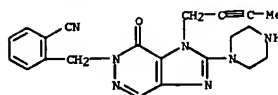
CRN 76-05-1
CHF C2 H F3 O2

RN 635721-60-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-(2-phenylethyl)-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-59-4
CHF C24 H26 N6 O

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

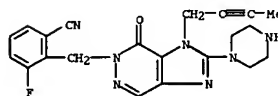


CH 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-30-1 CAPLUS
CN Benzonitrile, 2-[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-3-fluoro-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

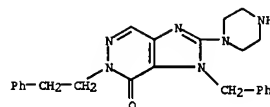
CH 1

CRN 635721-29-8
CHF C21 H20 F N7 O

CH 2

CRN 76-05-1
CHF C2 H F3 O2

L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

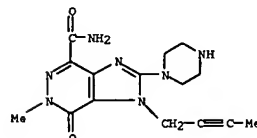


CH 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635722-02-0 CAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-4-carboxamide, 1-(2-butyryl)-6,7-dihydro-6-methyl-7-oxo-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635722-01-9
CHF C15 H19 N7 O2

CH 2

CRN 76-05-1
CHF C2 H F3 O2

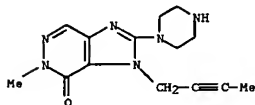
L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635722-43-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

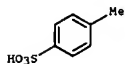
CH 1

CRN 635717-65-6
CMF C14 H18 N6 O



CH 2

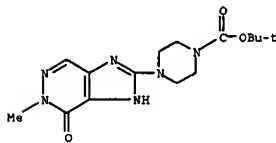
CRN 104-15-4
CMF C7 H8 O3 S



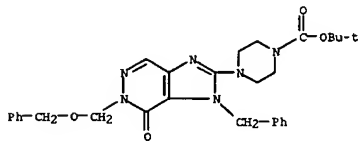
IT 635722-47-3P 635722-77-9P 635722-78-0P
635722-82-6P 635723-02-3P 635723-14-7P
635723-79-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; preparation of piperazine derivs. as dipeptidyl peptidase

IV inhibitors)
RN 635722-47-3 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[1-(2-butynyl)-6,7-dihydro-6-methyl-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

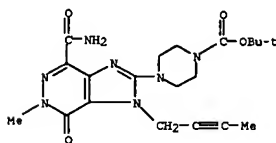
L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635723-02-3 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[6,7-dihydro-7-oxo-6-(phenylmethoxymethyl)-1-(phenylmethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

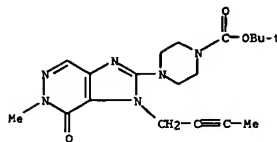


RN 635723-14-7 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4-(aminocarbonyl)-1-(2-butynyl)-6,7-dihydro-6-methyl-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

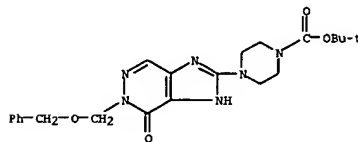


RN 635723-79-4 CAPLUS
CN Carbamic acid, [1-(4,5-dihydro-5-methyl-4-oxo-1H-imidazo[4,5-d]pyridazin-2-yl)-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

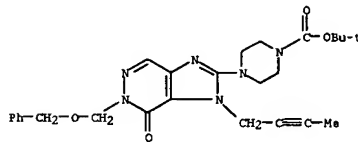
L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635722-77-9 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4,5-dihydro-4-oxo-5-(phenylmethoxymethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

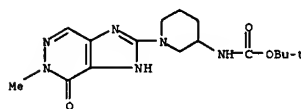


RN 635722-78-0 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[1-(2-butynyl)-6,7-dihydro-7-oxo-6-(phenylmethoxymethyl)-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 635722-82-6 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-(4,5-dihydro-5-methyl-4-oxo-1H-imidazo[4,5-d]pyridazin-2-yl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

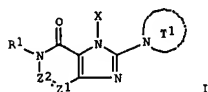
L4 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN
 AB
 ACCESSION NUMBER: 2003:591509 CAPLUS
 DOCUMENT NUMBER: 140:42192
 TITLE: Preparation of purinone derivatives as dipeptidylpeptidase IV (DPP-IV) inhibitors
 INVENTOR(S): Yoshikawa, Seiji; Emori, Eita; Matsuura, Fumiyoshi; Richard, Clark; Ikuta, Hironori; Kira, Kazunobu; Yasuda, Nobuyuki; Nagakura, Tadaashi; Yamazaki, Kazuto
 PATENT ASSIGNEE(S): Eisai Co., Ltd., Japan
 SOURCE: PCT Int. Appl., 376 pp.
 CODEN: PIXK2Z
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003104229	A1	20031218	WO 2003-JP7010	20030603
V: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2485641	AA	20031218	CA 2003-2485641	20030603
EP 1514552	A1	20050316	EP 2003-733276	20030603
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
BR 2003011697	A	20050322	BR 2003-11697	20030603
JP 3675813	B2	20050727	JP 2004-511299	20030603
US 2004116328	A1	20040617	US 2003-457002	20030606
JP 2005145951	A2	20050609	JP 2004-511299	20040830
NO 200500054	A	20050210	NO 2005-54	20050105
PRIORITY APPL. INFO.:				
JP 2002-166069 A 20020606				
JP 2002-209373 A 20020718				
JP 2002-307750 A 20021023				
JP 2004-511299 A3 20030603				
WO 2003-JP7010 W 20030603				

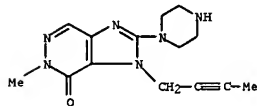
OTHER SOURCE(S): MARPAT 140:42192
 GI



L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635717-65-6
 CHF C14 H18 N6 O



CM 2

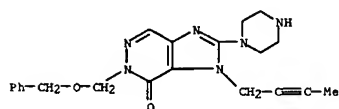
CRN 76-05-1
 CHF C2 H F3 O2



RN 635717-68-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635717-67-8
 CHF C21 H24 N6 O2



CM 2

CRN 76-05-1
 CHF C2 H F3 O2

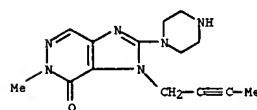
<12/22/2005>

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 AB The title compds. I [wherein T1 is an optionally substituted, monocyclic or bicyclic, 4- to 12-membered, heterocyclic group containing one or two nitrogen atoms in the ring; X is optionally substituted C1-6 alkyl, etc., Z1 and Z2 each independently is nitrogen, CR2; and R1 and R2 each independently is hydrogen, optionally substituted C1-6 alkyl, optionally substituted C1-6 alkoxy, etc.] are prepared. Compds. of this invention in vitro showed IC50 values of 0.001 μM to 1.48 μM against dipeptidylpeptidase IV.

IT 635717-65-6P 635717-66-7P 635717-68-9P
 635717-76-9P 635717-79-2P 635720-48-8P
 635720-50-2P 635720-52-4P 635720-54-6P
 635720-56-8P 635720-58-0P 635720-60-4P
 635720-62-6P 635720-64-8P 635720-66-0P
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 635720-74-0P 635720-76-2P 635720-78-4P
 635720-80-8P 635720-82-0P 635720-84-2P
 635720-86-4P 635720-88-6P 635720-90-0P
 635720-92-2P 635720-94-4P 635720-96-6P
 635720-98-8P 635721-00-5P 635721-02-7P
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 635722-42-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(Preparation of purinone derivs. as dipeptidylpeptidase IV inhibitors)
 RN 635717-65-6 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)- (9CI) (CA INDEX NAME)



RN 635717-66-7 CAPLUS

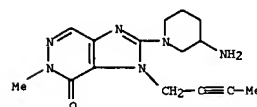
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635717-76-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635717-75-8
 CHF C15 H20 N6 O



CM 2

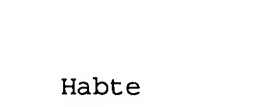
CRN 76-05-1
 CHF C2 H F3 O2



RN 635717-79-2 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3,5-dihydro-5-methyl-3-(3-methyl-2-butenyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

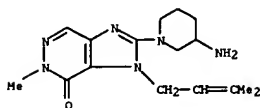
CM 1

CRN 635717-78-1
 CHF C16 H24 N6 O



Habte

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

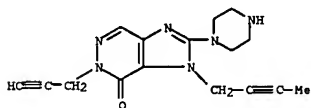


CH 2
CRN 76-05-1
CHF C2 H F3 O2



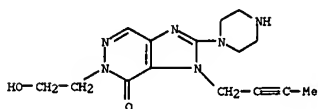
RN 635720-48-8 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(2-propynyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635720-47-7
CHF C16 H18 N6 O



CH 2
CRN 76-05-1
CHF C2 H F3 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

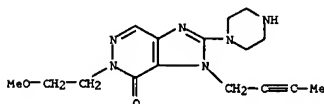


CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635720-54-6 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-(2-methoxyethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635720-53-5
CHF C16 H22 N6 O2



CH 2
CRN 76-05-1
CHF C2 H F3 O2



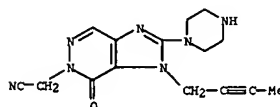
<12/22/2005>

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635720-50-2 CAPLUS
CN 5H-imidazo[4,5-d]pyridazine-5-acetonitrile, 3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635720-49-9
CHF C15 H17 N7 O



CH 2
CRN 76-05-1
CHF C2 H F3 O2



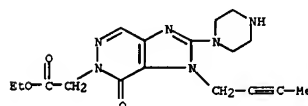
RN 635720-52-4 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-(2-hydroxyethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CH 1
CRN 635720-51-3
CHF C15 H20 N6 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635720-56-8 CAPLUS
CN 5H-imidazo[4,5-d]pyridazine-5-acetic acid, 3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-, ethyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635720-55-7
CHF C17 H22 N6 O3

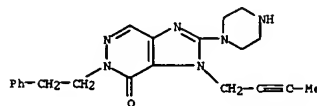


CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635720-58-0 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-(2-phenylethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635720-57-9
CHF C21 H24 N6 O

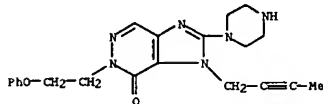


CH 2
HABTE

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 76-05-1
CHF C2 H F3 O2RN 635720-60-4 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-(2-phenoxylethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-59-1
CHF C21 H24 N6 O2

CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635720-62-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-(2-oxo-2-phenylethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

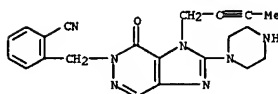
CH 1

CRN 635720-61-5

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635720-66-0 CAPLUS
CN Benzonitrile, 2-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

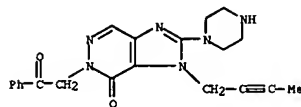
CH 1

CRN 635720-65-9
CHF C21 H21 N7 O

CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635720-68-2 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-[[2-(trifluoromethyl)phenyl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

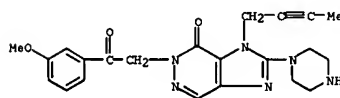
CH 1

CRN 635720-67-1
CHF C21 H21 F3 N6 OL4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CHF C21 H22 N6 O2

CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635720-64-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-(2-(3-methoxyphenyl)-2-oxoethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

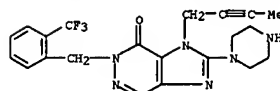
CH 1

CRN 635720-63-7
CHF C22 H24 N6 O3

CH 2

CRN 76-05-1
CHF C2 H F3 O2

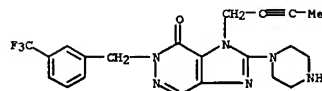
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635720-70-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-[[3-(trifluoromethyl)phenyl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-69-3
CHF C21 H21 F3 N6 O

CH 2

CRN 76-05-1
CHF C2 H F3 O2

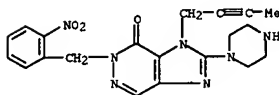
RN 635720-72-8 CAPLUS

Habt

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butyryl)-3,5-dihydro-5-[(2-nitrophenyl)methyl]-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-71-7
 CMF C20 H21 N7 O3



CH 2

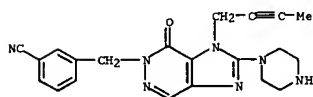
CRN 76-05-1
 CMF C2 H F3 O2



RN 635720-74-0 CAPLUS
 CN Benzonitrile, 3-[[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

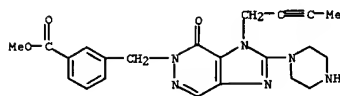
CH 1

CRN 635720-73-9
 CMF C21 H21 N7 O



CH 2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

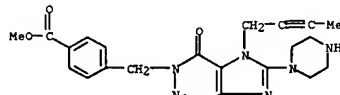
CRN 76-05-1
 CMF C2 H F3 O2



RN 635720-80-8 CAPLUS
 CN Benzoic acid, 4-[[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-79-5
 CMF C22 H24 N6 O3



CH 2

CRN 76-05-1
 CMF C2 H F3 O2



<12/22/2005>

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

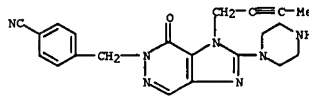
CRN 76-05-1
 CMF C2 H F3 O2



RN 635720-76-2 CAPLUS
 CN Benzonitrile, 4-[[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-75-1
 CMF C21 H21 N7 O



CH 2

CRN 76-05-1
 CMF C2 H F3 O2



RN 635720-78-4 CAPLUS
 CN Benzoic acid, 3-[[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-, methyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

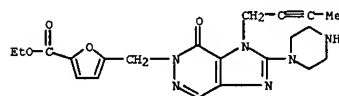
CRN 635720-77-3
 CMF C22 H24 N6 O3

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635720-82-0 CAPLUS
 CN 2-Furancarboxylic acid, 5-[[[3-(2-butyryl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl)methyl]-, ethyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-81-9
 CMF C21 H24 N6 O4



CH 2

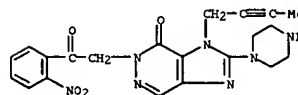
CRN 76-05-1
 CMF C2 H F3 O2



RN 635720-84-2 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butyryl)-3,5-dihydro-5-[(2-nitrophenyl)-2-oxoethyl]-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-83-1
 CMF C21 H21 N7 O4



CH 2

CRN 76-05-1

Habte

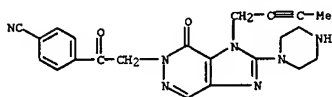
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CHF C2 H F3 O2



RN 635720-86-4 CAPLUS
CN Benzonitrile, 4-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]acetyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-85-3
CHF C22 H21 N7 O2



CH 2

CRN 76-05-1
CHF C2 H F3 O2



RN 635720-88-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[2-(4-methoxyphenyl)-2-oxoethyl]-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-87-5
CHF C22 H24 N6 O3

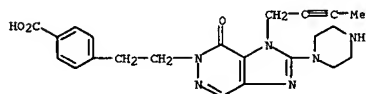
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635720-92-2 CAPLUS
CN Benzoic acid, 4-[[2-[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]ethyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-91-1
CHF C22 H24 N6 O3



CH 2

CRN 76-05-1
CHF C2 H F3 O2

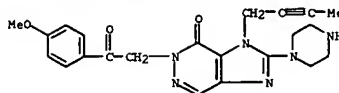


RN 635720-94-4 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(2-pyridinylmethyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-93-3
CHF C19 H21 N7 O

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

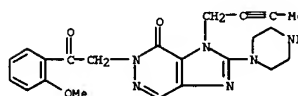
CRN 76-05-1
CHF C2 H F3 O2



RN 635720-90-0 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[2-(2-methoxyphenyl)-2-oxoethyl]-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

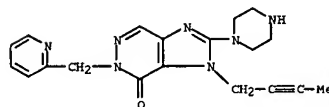
CRN 635720-89-7
CHF C22 H24 N6 O3



CH 2

CRN 76-05-1
CHF C2 H F3 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

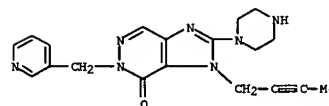
CRN 76-05-1
CHF C2 H F3 O2



RN 635720-96-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(3-pyridinylmethyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-95-5
CHF C19 H21 N7 O



CH 2

CRN 76-05-1
CHF C2 H F3 O2



<12/22/2005>

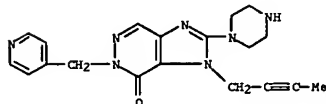
Habte

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635720-98-8 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-5-(4-pyridinylmethyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635720-97-7
CHF C19 H21 N7 O

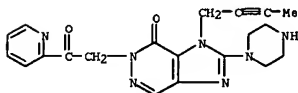
CH 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-00-5 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[2-oxo-2-(2-pyridinyl)ethyl]-2-(1-piperazinyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

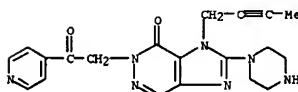
CH 1

CRN 635720-99-9
CHF C20 H21 N7 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635721-03-8

CHF C20 H21 N7 O2



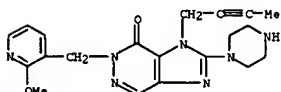
CH 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-06-1 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[(2-methoxy-3-pyridinyl)methyl]-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-05-0
CHF C20 H23 N7 O2

CH 2

CRN 76-05-1
CHF C2 H F3 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

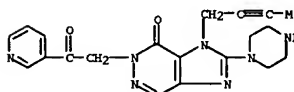
CH 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-02-7 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[2-oxo-2-(3-pyridinyl)ethyl]-2-(1-piperazinyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-01-6
CHF C20 H21 N7 O2

CH 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-04-9 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-[2-oxo-2-(4-pyridinyl)ethyl]-2-(1-piperazinyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

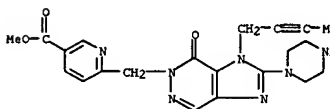
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635721-08-3 CAPLUS

CN 3-Pyridinecarboxylic acid, 6-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, methyl ester, bis(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-07-2
CHF C21 H23 N7 O3

CH 2

CRN 76-05-1
CHF C2 H F3 O2

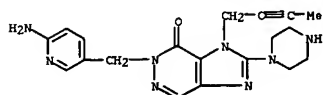
RN 635721-10-7 CAPLUS

CN 4H-Imidazo[4,5-d]pyridazin-4-one, 5-[(6-amino-3-pyridinyl)methyl]-3-(2-butynyl)-3,5-dihydro-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-09-4
CHF C19 H22 N8 O

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

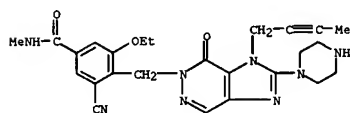


CH 2
CRN 76-05-1
CHF C2 H F3 O2



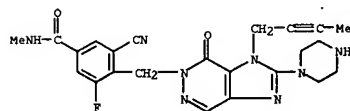
RN 635721-12-9 CAPLUS
CN Benzamide, 4-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-3-cyano-5-ethoxy-N-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635721-11-8
CHF C25 H28 N8 O3



CH 2
CRN 76-05-1
CHF C2 H F3 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

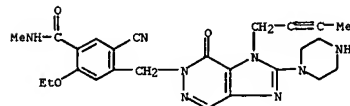


CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635721-18-5 CAPLUS
CN Benzamide, 4-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-5-cyano-2-ethoxy-N-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635721-17-4
CHF C25 H28 N8 O3



CH 2
CRN 76-05-1
CHF C2 H F3 O2



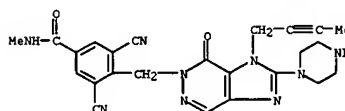
<12/22/2005>

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635721-14-1 CAPLUS
CN Benzamide, 4-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-3,5-dicyano-N-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635721-13-0
CHF C24 H23 N9 O2



CH 2
CRN 76-05-1
CHF C2 H F3 O2



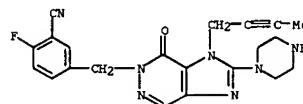
RN 635721-16-3 CAPLUS
CN Benzamide, 4-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-3-cyano-5-fluoro-N-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635721-15-2
CHF C23 H23 F N8 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635721-21-0 CAPLUS
CN Benzonitrile, 5-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-2-fluoro-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635721-20-9
CHF C21 H20 F N7 O

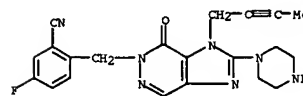


CH 2
CRN 76-05-1
CHF C2 H F3 O2



RN 635721-24-3 CAPLUS
CN Benzonitrile, 2-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-5-fluoro-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1
CRN 635721-23-2
CHF C21 H20 F N7 O



CH 2
CRN 76-05-1

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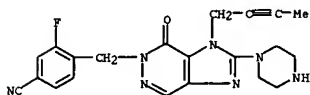
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CHF C2 H F3 O2



RN 635721-27-6 CAPLUS
CN Benzonitrile, 4-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-3-fluoro-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-26-5
CHF C21 H20 F N7 O



CH 2

CRN 76-05-1
CHF C2 H F3 O2



RN 635721-30-1 CAPLUS
CN Benzonitrile, 2-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-3-fluoro-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-29-8
CHF C21 H20 F N7 O

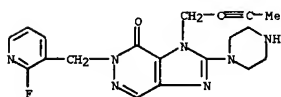
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635721-34-5 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-5-[(2-fluoro-3-pyridinyl)methyl]-3,5-dihydro-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-33-4
CHF C19 H20 F N7 O



CH 2

CRN 76-05-1
CHF C2 H F3 O2

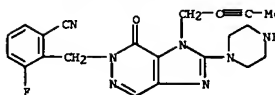


RN 635721-36-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-5-[(2-fluoro-4-pyridinyl)methyl]-3,5-dihydro-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-35-6
CHF C19 H20 F N7 O

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

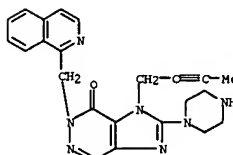
CRN 76-05-1
CHF C2 H F3 O2



RN 635721-32-3 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-(1-isoquinolinylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

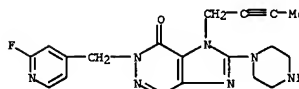
CRN 635721-31-2
CHF C23 H23 N7 O



CH 2

CRN 76-05-1
CHF C2 H F3 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

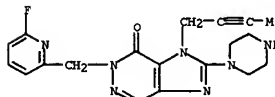
CRN 76-05-1
CHF C2 H F3 O2



RN 635721-38-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-5-[(6-fluoro-2-pyridinyl)methyl]-3,5-dihydro-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-37-8
CHF C19 H20 F N7 O



CH 2

CRN 76-05-1
CHF C2 H F3 O2



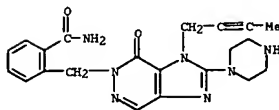
RN 635721-41-4 CAPLUS

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L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CN Benzamide, 2-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-40-3
 CMF C21 H23 N7 O2



CM 2

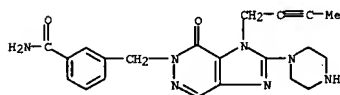
CRN 76-05-1
 CMF C2 H F3 O2



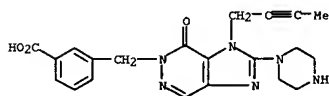
RN 635721-44-7 CAPLUS
 CN Benzamide, 3-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-43-6
 CMF C21 H23 N7 O2



L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CRN 635721-47-0
 CMF C21 H22 N6 O3



CM 2

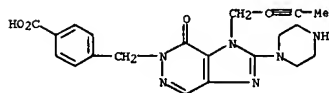
CRN 76-05-1
 CMF C2 H F3 O2



RN 635721-50-5 CAPLUS
 CN Benzoic acid, 4-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-49-2
 CMF C21 H22 N6 O3



CM 2

CRN 76-05-1
 CMF C2 H F3 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CM 2

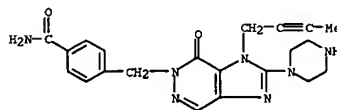
CRN 76-05-1
 CMF C2 H F3 O2



RN 635721-46-9 CAPLUS
 CN Benzamide, 4-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-45-8
 CMF C21 H23 N7 O2



CM 2

CRN 76-05-1
 CMF C2 H F3 O2



RN 635721-48-1 CAPLUS
 CN Benzoic acid, 3-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

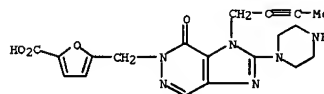
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635721-52-7 CAPLUS
 CN 2-Furancarboxylic acid, 5-[[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-51-6
 CMF C19 H20 N6 O4



CM 2

CRN 76-05-1
 CMF C2 H F3 O2

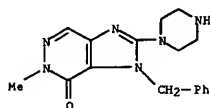


RN 635721-56-1 CAPLUS
 CN 4H-imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-methyl-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-55-0
 CMF C17 H20 N6 O

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

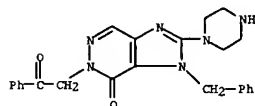


CM 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-58-3 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-(2-oxo-2-phenylethyl)-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

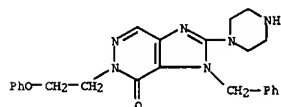
CM 1

CRN 635721-57-2
CHF C24 H24 N6 O2

CM 2

CRN 76-05-1
CHF C2 H F3 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

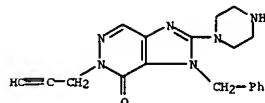


CM 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-64-1 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-3-(phenylmethyl)-2-(1-piperazinyl)-5-(2-propynyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-63-0
CHF C19 H20 N6 O

CM 2

CRN 76-05-1
CHF C2 H F3 O2

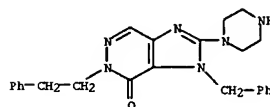
<12/22/2005>

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635721-60-7 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-(2-phenylethyl)-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-59-4
CHF C24 H26 N6 O

CM 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-62-9 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-(2-phenoxyethyl)-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

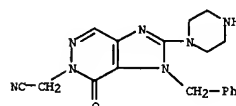
CM 1

CRN 635721-61-8
CHF C24 H26 N6 O2

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635721-66-3 CAPLUS
CN 5H-imidazo[4,5-d]pyridazine-5-acetonitrile, 3,4-dihydro-4-oxo-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

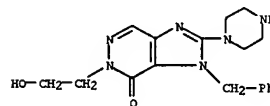
CRN 635721-65-2
CHF C18 H19 N7 O

CM 2

CRN 76-05-1
CHF C2 H F3 O2

RN 635721-68-5 CAPLUS
CN 4H-imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-(2-hydroxyethyl)-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (salt) (9CI) (CA INDEX NAME)

CM 1

CRN 635721-67-4
CHF C18 H22 N6 O2

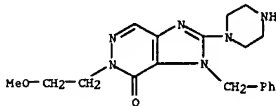
CM 2

Habte

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 76-05-1
CHF C2 H F3 O2RN 635721-70-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-(2-methoxyethyl)-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635721-69-6
CHF C19 H24 N6 O2

CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635721-72-1 CAPLUS
CN 5H-Imidazo[4,5-d]pyridazine-5-acetic acid, 3,4-dihydro-4-oxo-3-(phenylmethyl)-2-(1-piperazinyl)-, ethyl ester, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

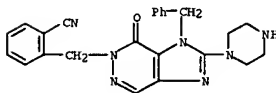
CH 1

CRN 635721-71-0

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

RN 635721-76-5 CAPLUS
CN Benzotrile, 2-[[[3,4-dihydro-4-oxo-3-(phenylmethyl)-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

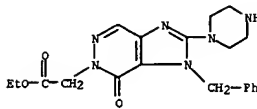
CH 1

CRN 635721-75-4
CHF C24 H23 N7 O

CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635721-78-7 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-methyl-2-(1-piperazinyl)-3-(2-propynyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

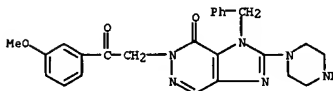
CH 1

CRN 635721-77-6
CHF C13 H16 N6 OL4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
CHF C20 H24 N6 O3

CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635721-74-3 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-[2-(3-methoxyphenyl)-2-oxoethyl]-3-(phenylmethyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

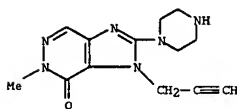
CH 1

CRN 635721-73-2
CHF C25 H26 N6 O3

CH 2

CRN 76-05-1
CHF C2 H F3 O2

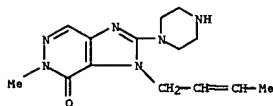
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



CH 2

CRN 76-05-1
CHF C2 H F3 O2RN 635721-80-1 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butenyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

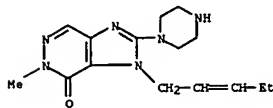
CH 1

CRN 635721-79-8
CHF C14 H20 N6 O

CH 2

CRN 76-05-1
CHF C2 H F3 O2

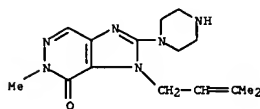
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 RN 635721-82-3 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-methyl-3-(2-pentenyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
 CH 1
 CRN 635721-81-2
 CMF C15 H22 N6 O



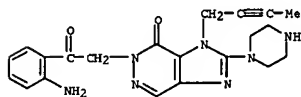
CH 2
 CRN 76-05-1
 CMF C2 H F3 O2



RN 635721-84-5 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3,5-dihydro-5-methyl-3-(3-methyl-2-butenyl)-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
 CH 1
 CRN 635721-83-4
 CMF C15 H22 N6 O



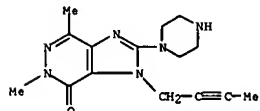
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CMF C21 H23 N7 O2



CH 2
 CRN 76-05-1
 CMF C2 H F3 O2



RN 635721-90-3 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butenyl)-3,5-dihydro-5,7-dimethyl-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
 CH 1
 CRN 635721-89-0
 CMF C15 H20 N6 O



CH 2
 CRN 76-05-1
 CMF C2 H F3 O2

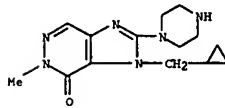


<12/22/2005>

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 CH 2
 CRN 76-05-1
 CMF C2 H F3 O2



RN 635721-86-7 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(cyclopropylmethyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
 CH 1
 CRN 635721-85-6
 CMF C14 H20 N6 O

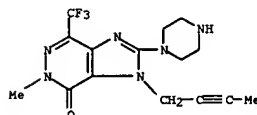


CH 2
 CRN 76-05-1
 CMF C2 H F3 O2



RN 635721-88-9 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 5-[2-(2-aminophenyl)-2-oxoethyl]-3-(2-butenyl)-3,5-dihydro-2-(1-piperazinyl)-, bis(trifluoroacetate) (9CI) (CA INDEX NAME)
 CH 1
 CRN 635721-87-8

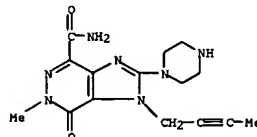
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)
 RN 635722-00-8 CAPLUS
 CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butenyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-7-(trifluoromethyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
 CH 1
 CRN 635721-99-2
 CMF C15 H17 F3 N6 O



CH 2
 CRN 76-05-1
 CMF C2 H F3 O2



RN 635722-02-0 CAPLUS
 CN 1H-Imidazo[4,5-d]pyridazine-4-carboxamide, 1-(2-butenyl)-6,7-dihydro-6-methyl-7-oxo-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)
 CH 1
 CRN 635722-01-9
 CMF C15 H19 N7 O2



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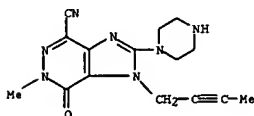
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CH 2

CRN 76-05-1
CMF C2 H F3 O2

RN 635722-04-2 CAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-4-carbonitrile, 1-(2-butynyl)-6,7-dihydro-6-methyl-7-oxo-2-(1-piperazinyl)-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

CRN 635722-03-1
CMF C15 H17 N7 O

CH 2

CRN 76-05-1
CMF C2 H F3 O2

RN 635722-38-2 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[1(R,2R)-2-aminocyclohexyl]amino]-3-(2-butynyl)-3,5-dihydro-5-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CH 1

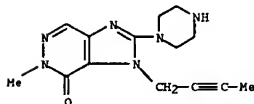
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CH 2

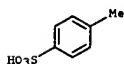
CRN 76-05-1
CMF C2 H F3 O2

RN 635722-43-9 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 3-(2-butynyl)-3,5-dihydro-5-methyl-2-(1-piperazinyl)-, mono(4-methylbenzenesulfonate) (9CI) (CA INDEX NAME)

CH 1

CRN 635717-65-6
CMF C14 H18 N6 O

CH 2

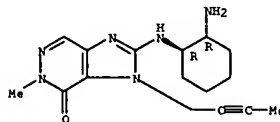
CRN 104-15-4
CMF C7 H9 O3 S

IT 635717-75-8 635720-65-9
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of purinone derivs. as dipeptidylpeptidase IV inhibitors)
RN 635717-75-8 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-(3-amino-1-piperidinyl)-3-(2-butynyl)-3,5-dihydro-5-methyl- (9CI) (CA INDEX NAME)

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

CRN 635722-37-1
CMF C16 H22 N6 O

Absolute stereochemistry.



CH 2

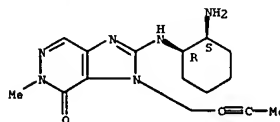
CRN 76-05-1
CMF C2 H F3 O2

RN 635722-40-6 CAPLUS
CN 4H-Imidazo[4,5-d]pyridazin-4-one, 2-[[1(R,2S)-2-aminocyclohexyl]amino]-3-(2-butynyl)-3,5-dihydro-5-methyl-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

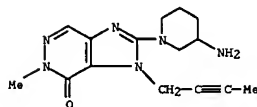
CH 1

CRN 635722-39-3
CMF C16 H22 N6 O

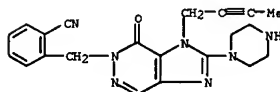
Absolute stereochemistry.



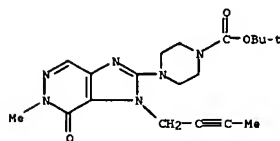
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635720-65-9 CAPLUS
CN Benzonitrile, 2-[[3-(2-butynyl)-3,4-dihydro-4-oxo-2-(1-piperazinyl)-5H-imidazo[4,5-d]pyridazin-5-yl]methyl]- (9CI) (CA INDEX NAME)

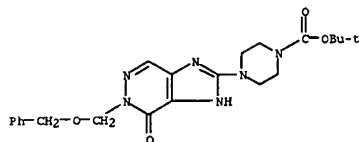


IT 635722-47-3P 635722-77-9P 635722-78-0P
635722-82-6P 635723-02-3P 635723-04-5P
635723-14-7P 635723-79-4P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of purinone derivs. as dipeptidylpeptidase IV inhibitors)
RN 635722-47-3 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[1-(2-butynyl)-6,7-dihydro-6-methyl-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

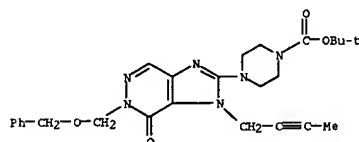


RN 635722-77-9 CAPLUS
CN 1-Piperazinecarboxylic acid, 4-[4,5-dihydro-4-oxo-5-[(phenylmethoxy)methyl]-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

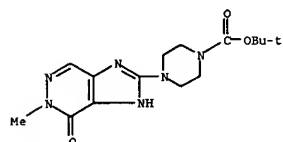
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635722-78-0 CAPLUS
 CN 1-Piperazinecarboxylic acid, 4-[1-(2-butyryl)-6,7-dihydro-7-oxo-6-[(phenylmethoxy)methyl]-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

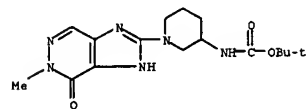


RN 635722-82-6 CAPLUS
 CN 1-Piperazinecarboxylic acid, 4-(4,5-dihydro-5-methyl-4-oxo-1H-imidazo[4,5-d]pyridazin-2-yl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



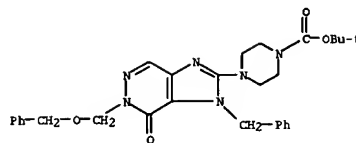
RN 635723-02-3 CAPLUS
 CN 1-Piperazinecarboxylic acid, 4-(6,7-dihydro-7-oxo-6-[(phenylmethoxy)methyl]-1-(phenylmethyl)-1H-imidazo[4,5-d]pyridazin-2-yl)-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)

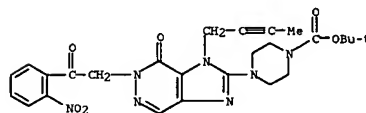


REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

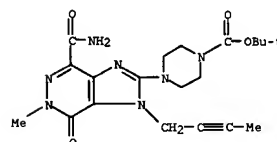
L4 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN (Continued)



RN 635723-04-5 CAPLUS
 CN 1-Piperazinecarboxylic acid, 4-[1-(2-butyryl)-6,7-dihydro-6-[2-(2-nitrophenyl)-2-oxoethyl]-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



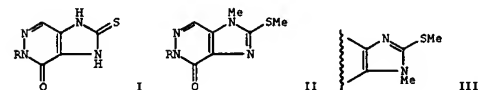
RN 635723-14-7 CAPLUS
 CN 1-Piperazinecarboxylic acid, 4-[4-(aminocarbonyl)-1-(2-butyryl)-6,7-dihydro-6-methyl-7-oxo-1H-imidazo[4,5-d]pyridazin-2-yl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 635723-79-4 CAPLUS
 CN Carbamic acid, [1-(4,5-dihydro-5-methyl-4-oxo-1H-imidazo[4,5-d]pyridazin-2-yl)-3-piperidinyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

L4 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2005 ACS on STN

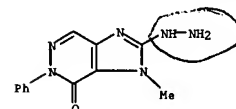
ACCESSION NUMBER: 1983:612483 CAPLUS
 DOCUMENT NUMBER: 99:212483
 TITLE: Heterocyclic hydrazines and hydrazones. IV. Synthesis of hydrazine derivatives in the [4,5-d]imidazo-4-pyridazinone series
 AUTHOR(S): Beljeau-Leymarie, Martine; Pays, Michel; Richer, Jean Claude
 CORPORATE SOURCE: UER Sci. Pharm., Caen, 14032, Fr.
 SOURCE: Canadian Journal of Chemistry (1983), 61(11), 2563-6
 CODEN: CJCHAG; ISSN: 0008-4042
 DOCUMENT TYPE: Journal
 LANGUAGE: French
 OTHER SOURCE(S): CASREACT 99:212483
 GI



AB Imidazopyridazinones I (R = Me, Ph) were prepared from the corresponding diaminoimidazopyridazinones by cyclocondensation with CS₂. Methylation of I gave mixts. of II and III, whose structures have been established by the Overhauser effect. The imidazopyridazinones are used for preparation of hydrazines and hydrazones. The mass spectra of several key intermediates are presented and discussed.

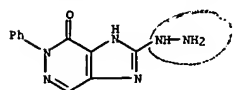
IT RL: RCT (Reactant); RACT (Reactant or reagent)
 (of thioximidazopyridazinones)

RN 87946-47-2 CAPLUS
 CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-3-methyl-5-phenyl-, 2-hydrazone (9CI) (CA INDEX NAME)

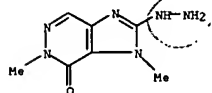


RN 87946-48-3 CAPLUS
 CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-5-phenyl-, 2-hydrazone (9CI) (CA INDEX NAME)

L4 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2005 ACS on STM (Continued)



IT 87946-44-9P 87946-45-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 87946-44-9 CAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-3,5-dimethyl-,
2-hydrazono (9CI) (CA INDEX NAME)



RN 87946-45-0 CAPLUS
CN 1H-Imidazo[4,5-d]pyridazine-2,4-dione, 3,5-dihydro-5-methyl-, 2-hydrazono
(9CI) (CA INDEX NAME)

